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No. 37

Pesticides Essential to Profitable Crop Output, NAC bold; Sales Potential in Highway Program Outlined

USDA Reports Good Progress in Fight to Control Medfly

More Than 300,000
Acres Sprayed in
Area of Infestation

WASHINGTON — Aerial spraying continuing against the Mediterranean fruit fly around Miami, Fla., as "touch-up" spraying in other areas, and trapping surveys are in progress or planned in several areas inside the state, the U.S. Department of Agriculture has announced.

Insecticidal spraying — chief weapon in the intensive federal-state control and eradication program — is being concentrated on remaining trouble spots within three counties on the southeastern Florida coast. A contract for additional aerial sprayings on some 40,000 acres in the Miami area was signed in August with United-Heckman Co., USDA said.

Arrival of additional detection traps permitting wider Medfly trapping in the Everglades and on offshore islands. The search for this fruit and vegetable pest will be extended to areas on the Gulf of Mexico, South Atlantic coast, Mexican border and far away as Puerto Rico, the American Virgin Islands and Jamaica, USDA officials say.

Aerial applications of insecticidal bait spray have been made over the area of general infestation in Dade, Broward and Palm Beach counties, totalling more than

(Continued on page 8)

Nearly Million Acres in Gypsy Moth Control Program

WASHINGTON — A total of 941,464 acres were sprayed in the 1956 gypsy moth control program, the U.S. Department of Agriculture has announced. The total includes 627,026 acres sprayed under federal contracts and 314,438 acres sprayed by state agencies.

The acreage by states included 15,300 in Connecticut, 200 in Maine, 120,000 in Massachusetts, 98,000 in Michigan, 152,098 in New Jersey, 446,203 in New York, 89,140 in Pennsylvania, 15,000 in Rhode Island and 4,000 in Vermont.

The totals include both aerial and ground blower applications.

SPRING LAKE, N.J. — Some 500 persons representing many segments of the agricultural pesticide trade met at the Essex and Sussex Hotel here Sept. 5-7 in the 23rd annual convention of the National Agricultural Chemicals Assn.

The program included panel discussions and talks by representatives of the U.S. Department of Agriculture and the industry. The panels discussed factors that influence farmers to accept and buy new materials

and ideas; and the sales potentials involved in the new highway program.

W. W. Allen, Dow Chemical Co., Midland, Mich., retiring president of the association, told the group that the same fears which people expressed about the steel plow a century ago are being voiced today about the chemicals used by farmers.

He said that when the steel plow

was new, some people feared it would "poison the soil or the crops that grew in the soil." Through use, however, the steel plow proved not only to be safe, but also came to be accepted universally. "Chemicals," he said, "are proving themselves safe and useful in a similar way."

Referring to the association and its work of assembling information about the products made and sold by members, Mr. Allen said that "we have an obligation to the public to make available the great body of information that has been developed about these materials so that people who wish to do so, will have the facts with which to understand them."

He said that "in the future, we will have more products of more different kinds to do more jobs better for more people." He forecast tremendous increases in growth of the business and in public understanding of its products.

Representing the Agricultural Research Service of USDA, Dr. E. F. Knipling declared that "chemicals generally provide the most successful means of insect control," although biological controls are also of great importance in this regard.

"Hundreds of destructive pests are readily controlled with chemicals and some of our leading crops, such as cotton, most vegetables, many fruits and certain forage crops, could not be produced profitably without the various insect control chemicals that are now available to the growers," Dr. Knipling said.

"Other important crops and livestock would suffer severe damage, particularly in insect outbreak years, without the use of insecticides. The total research investment of the federal and state agencies and that of industry, all of which have cooperated, has yielded high returns to the grower

(Continued on page 20)

NAC Panel Outlines Factors Influencing Selection, Use Of Pesticides by Farmers

SPRING LAKE, N.J. — American farmers are influenced by down-to-earth facts from reliable sources, but they quickly reject claims that appear to be exaggerated and are inclined to be skeptical of information that comes from untried sources, according to the testimony of five experts on a panel at the 23rd annual meeting of the National Agricultural Chemicals Assn. here Sept. 5-7.

The panel, representing members of the farm press, farm radio and television, the agricultural extension

service, company sales managers and retailers, discussed problems in connection with the question of "who and what influences growers in their selection and use of pesticides?"

The moderator of the panel was Montgomery Budd, director of advertising, Hercules Powder Co., Wilmington, Del. Appearing on the platform were William A. Haffert, Jr., editor, "New Jersey Farm and Garden"; Dr. Ellsworth Fisher, extension entomologist, University of Wisconsin, Madison; John McDonald, radio farm director, Station WSM, Nashville, Tenn., and president of the National Association of Radio and Television Farm Directors; Blanchard J. Smith, vice president, Chipman Chemical Co., Bound Brook, N.J., and "Chief" Jones, Muleshoe, Texas, dealer in agricultural chemicals.

The panelists drew a picture of the American farmer as a conservative who is motivated by a sense of pride in the quality of his crop production and by the desire for a higher income.

Mr. Haffert said that information directed to farmers should be regionalized in order to do a more specific job. He added that when trying to sell anything to farmers, one should be "ready to prove that what you sell can make a farmer more money or can satisfy his price."

As to where farmers get their information, he said, there have been

(Continued on page 21)

Fred W. Hatch New President of NAC

SPRING LAKE, N.J. — Fred W. Hatch, manager of agricultural chemical division, Shell Chemical Corp., New York, was named president of the National Agricultural Chemicals Assn. at the group's 23rd annual meeting here Sept. 5-7. He succeeds W. W. Allen, Dow Chemical Co., Midland, Mich.

Other officers elected at the convention included J. V. Vernon, president, Niagara Chemical Division, Food Machinery and Chemical Corp., Middleport, N.Y., vice president, to succeed Mr. Hatch.

Three new members were elected to the association's board of directors. They are Arthur W. Mohr, president, California Spray-Chemical Corp., Richmond, Cal.; George R. Vila, assistant general manager, Naugatuck Chemical Division, U.S. Rubber Co., Naugatuck, Conn. and T. L. Wilkerson, general sales manager, Agricultural Chemicals Division, American Cyanamid Co., New York.

The association announced that two members also retired from the board. They are Paul Mayfield, vice president, Hercules Powder Co., Wilmington, and August Petrus, president, Cotton States Chemical Co., Inc., West Monroe, La.

First Aqua Ammonia Shipped from Phillips Pacific Chemical Plant

KENNEWICK, WASH. — The first aqua ammonia fertilizer has been shipped from Phillips Pacific Chemical Co.'s Coulee plant, near Kennewick, Wash., to Pacific Supply Co-operative, of Portland, Ore.

The aqua ammonia is produced from anhydrous ammonia. The anhydrous ammonia will continue to be shipped from Phillips Chemical Co.'s plants in Texas until the manufacturing facilities are completed later this year at the Coulee plant.

When completed, the Coulee plant will manufacture ammonia fertilizer in both anhydrous and aqua forms. Phillips Pacific Chemical Co. is jointly owned by Phillips and Pacific Northwest Pipeline Corp.

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Agriform To Be Succeeded by Four New Corporations

BAKERSFIELD, CAL.—John C. Anderson, president of Agriform Co., Inc. of Bakersfield, has announced an agreement for the sale of all physical assets of Agriform, which will be liquidated to be succeeded by four new and separate independent corporations.

Each of the four new corporations will buy a part of the total physical assets of the original corporation and continue the business.

The new corporations participating in the purchase are Agriform Co. of Imperial Valley, Inc., William H. Remsen, president; Agriform Co. of Kern County, Inc., F. E. Wingate, president; Agriform Co. of Corcoran, Inc., Donald Hixon, president; and Agriform Co. of Northern California, Inc. at Woodland, D. W. Galbraith, president.

The original company was estab-

lished in 1945. It pioneered the manufacture of neutral ammonium phosphate fertilizer solutions.

Mr. Anderson said, "The purchase follows the current trend of one step distribution between the manufacturer and the farmer, and it will permit operational economies that will help the new corporation serve the farmer better!"

California Firm Ceases Fertilizer Production

BERKELEY, CAL.—The California Vegetable Oil Co. has ceased production of its line of mixed dry fertilizers sold under the label of Calorganic. Decision to discontinue manufacture of the chemicals came as a result of an illness suffered by Charles Callaghan, owner of the firm, and production was not resumed following his recovery. The company continues to manufacture a line of chemicals for industrial uses only.

Lilly Distributes Plant Growth Chemical for Study

INDIANAPOLIS—Eli Lilly & Co. here has announced that it is distributing gibberellic acid to scientists at agricultural colleges and other institutions for more study of the chemical's properties as a plant growth stimulator and growth regulator.

The firm has studied the chemical as a plant growth stimulant in both climate-controlled laboratories and under field conditions. Under laboratory conditions, the material has increased the growth rate of some plants by five times, the company said.

According to T. P. Carney, vice-president of research, development, and control, "the substance has exciting possibilities as a plant growth regulator, but a great deal of laborious and time-consuming research must still be done before the full extent of its usefulness is known."

Gibberellic acid is obtained from cultures of a fungus called *Gibberella fujikuroi*. Technically, the chemical is tetracyclic dihydroxy-lactonic acid, with a formula of $C_{28}H_{42}O_6$.

Up to the present time, production problems have made it impossible to obtain a sufficient quantity of the chemical to supply even research requirements.

According to Dr. Carney, gibberellic acid has been tested not only at Eli Lilly & Co. but also by a few scientists in the U.S. and other countries, and interest in the chemical is spreading. Recently a number of scientific papers on gibberellic acid were presented at a conference of biological scientists held at the University of Connecticut, at Storrs.

In past experiments, gibberellic acid has been shown to stimulate growth in field crops such as wheat, oats, clover, the grasses (including corn), and tobacco. It has also speeded growth in vegetables such as peas, beans, tomatoes, cucumbers, and others. And it promotes growth in ornamental flowers, shrubs and even trees.

Besides speeding growth, gibberellic acid has other potential uses. In scientific experiments, it has been shown to break dormancy in specific plants, to stimulate germination in certain seeds, to reverse dwarfism, and to induce flowering of biennials in the year in which they wouldn't ordinarily flower, Lilly said.

Extremely minute amounts of the chemical are needed to give plants a growth spurt. In Lilly laboratory tests, applying as little as a one-hundred millionth of a gram of gibberellic acid to pea seedlings resulted in growth stimulation. The acid was put into solution and applied to the plants with micro-pipettes.

Under controlled conditions, gibberellic acid has been applied successfully in four ways: sprayed onto the leaves, fed through the roots, injected into the stem, and rubbed onto the stem as part of a lanolin paste.

One of the major problems to be surmounted before the full usefulness of gibberellic acid is known is the vast amount of investigational work to be completed. This work must be done by qualified scientists in different parts of the country, under different conditions, and on an appalling number and variety of plants.

New Store Location

STOCKTON, CAL.—Orfac Corp. has moved its retail store from 445 W. Main St., Stockton to the plant on McKinley Ave. in order to develop a "more efficient operation", according to Andrea Gusmano, owner. Mr. Gusmano, formerly representative for Green Goddess products, purchased the fertilizer manufacturing concern two years ago and has made Bob Hinkley manager.



C. Tom Nixon

C. Tom Nixon Named Assistant Secretary Of Ashcraft-Wilkinson

ATLANTA—At a recent meeting of the board of directors of Ashcraft Wilkinson Co., C. Tom Nixon was appointed assistant secretary of the company. Mr. Nixon received his degree in chemical engineering at the Georgia Institute of Technology, worked for several years with E. I. DuPont de Nemours & Co., served with the armed forces in World War II and the Korean War. In addition to the office of assistant secretary Mr. Nixon is in charge of technical work in connection with the company's distribution of nitrogen products produced by Escambia Bay Chemical Corp. and sulphur and potash produced by Duval Sulphur & Potash Co. At the same meeting of the board, H. Wayne Tyson was appointed assistant treasurer.

TVA Receives Seven Patents

WASHINGTON—TVA has reported that seven patents covering chemical engineering developments were issued by the U.S. Patent Office during the fiscal year 1956 which ended June 30, bringing to 110 the number of such patents issued to TVA. Eleven patent applications were on file at the close of the year.

Two patents issued in fiscal 1956 were on fertilizer ammoniation, one on the method and the other on the ammoniation equipment. Other developments covered in the newly issued patents included the rotating electric phosphorus furnace, a process for making carbonated nitric phosphate fertilizer, a process for making ammonium metaphosphate, improvements in methods for the crystallization of ammonium nitrate, and an improved process for drying gases in contact with phosphoric acid.

During the fiscal year 25 licenses were issued by TVA to fertilize chemical, and equipment manufacturers to use TVA patented processes. Altogether TVA has issued 91 licenses for the use of its chemical engineering developments.

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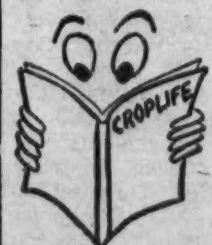


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What's New

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See Page 10

Spencer Sales and Profits Set Record Fiscal 1955-56

KANSAS CITY—Record sales and profits have been reported by Spencer Chemical Co. for the fiscal year ending June 30. Diversification programs, including its entrance into the polyethylene field and the completion of more facilities for the upgrading of its basic ammonia into more marketable forms of nitrogen products, contributed to the record showing in the latest fiscal year the company reported in a statement Sept. 5.

Total sales for the year increased to \$45,624,949, compared with \$4,921 a year earlier. Net profits amounted to \$5,924,485, equal to \$4.73 per common share, after preferred dividends. In the previous year the net profit was \$1,118,454 equal to \$4.04 a share.

The company's program of diversification will provide greater income opportunities in the future, Kenneth A. Spencer, president, said in the annual report. He expressed optimism over the plastic industry as an "increasingly important segment of the company's business." Polyethylene not only accounted for the increase in sales but more than offset a decline in income from sales of nitrogen products.

Although profit margins were squeezed by lower prices for nitrogen and a smaller demand owing to severe drought conditions, nitrogen products continued to constitute a major part of the sales and profits in the latest fiscal year.

The report said that the company anticipated some years ago that the surplus of nitrogen would develop and took "constructive steps to put itself in the best possible position to operate at a profit during this period."

The company spent \$3,643,000 during the year for additions to property and equipment, including the expansion of nitric acid and nitrogen production facilities at Vicksburg, Miss., the purchase of a carbon dioxide plant at Ft. Worth. To meet expanding demand for formaldehyde, Spencer is increasing its Chicago operation this year to provide 30% greater capacity.

The report emphasized the accelerated technical and research activities directed to future growth. About \$1,000,000 was spent in the latest year on these related programs in the current year the budget for such work is \$2,100,000.

The company remains in a strong financial position and is keeping sufficient capital on hand not only for current business but also to finance new projects which are being explored, Mr. Spencer reported to shareholders.

The June 30 balance sheet showed net assets of \$31,442,000 of which \$22,519,000 was in cash and government securities. Current liabilities totaled \$9,580,000, including \$7,000 for income taxes. Working capital was \$21,862,000, up from \$381,000 a year before.

ZOOLOGY APPOINTMENT

DAVIS, CAL.—Robert L. Rudd has been named to the staff of the department of zoology at the University of California, Davis. The appointment is a return to this campus for Mr. Rudd, a year ago wound up a special investigation here on the effects of pesticides on mammals, birds and insects. The study was sponsored by the California Department of Fish and Game and supported by Pittman-Robertson funds. The three-year appointment was carried forward in the department of zoology at Davis under the direction of Lauren E. Rosenblatt, chairman of the department.

California Adopts Quarantine for Walnut Husk Fly Control

SACRAMENTO—The California Department of Agriculture, following a public hearing, has established a quarantine effective Sept. 21 to prevent further spread of the walnut husk fly in California.

The counties of Imperial, Los Angeles, Orange, Riverside, San Diego, Ventura and portions of Kern, San Bernardino and Sonoma will be brought under quarantine regulations.

Walnuts and butternuts in the hull or the nuts with hulls adhering to the shell may be moved across established quarantine lines when fumigated or otherwise treated by methods approved by the director of agriculture. Containers that have been used previously to handle or transport nuts with hulls may be moved from the infested areas when certified as treated.

Movements from the quarantined

areas of equipment, appliances, or things which have been used in harvesting, hulling, dehydrating, shelling, transporting and storing of nuts with hulls are permitted when certified as having been treated.

Zinc Boosts Yields of Row Crops in California

SACRAMENTO—Various row crops in Central California are responding to treatment with zinc, according to John C. Lingle, assistant professor of vegetable crops at the University of California College of Agriculture.

Yields of sweet and field corn, beans, tomatoes and sugar beets have been increased in areas of zinc deficiency by spraying.

Mr. Lingle said his experience with row crops has been similar to that of others working with fruit trees in that zinc applied as a foliage spray was more effective than as a soil additive.

As an example, four pounds of

SWAP FERTILIZER FOR CAMEL

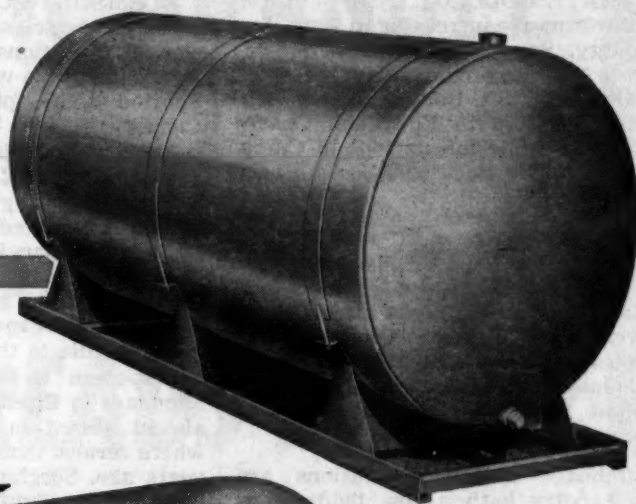
JACKSON, MISS.—The City of Jackson recently swapped \$1,200 worth of fertilizer for a Dromedary camel. City officials explained Jackson really doesn't have any fertilizer to swap. But it paid North Atlantic Fertilizer and Chemical Co. of New York \$1,200 for that much fertilizer to be delivered to the owner of the camel in Africa.

zinc sulfate per acre sprayed on foliage produced more yield in sugar beets in the Clarksburg area than 50 lb. of the same material used as a side dressing.

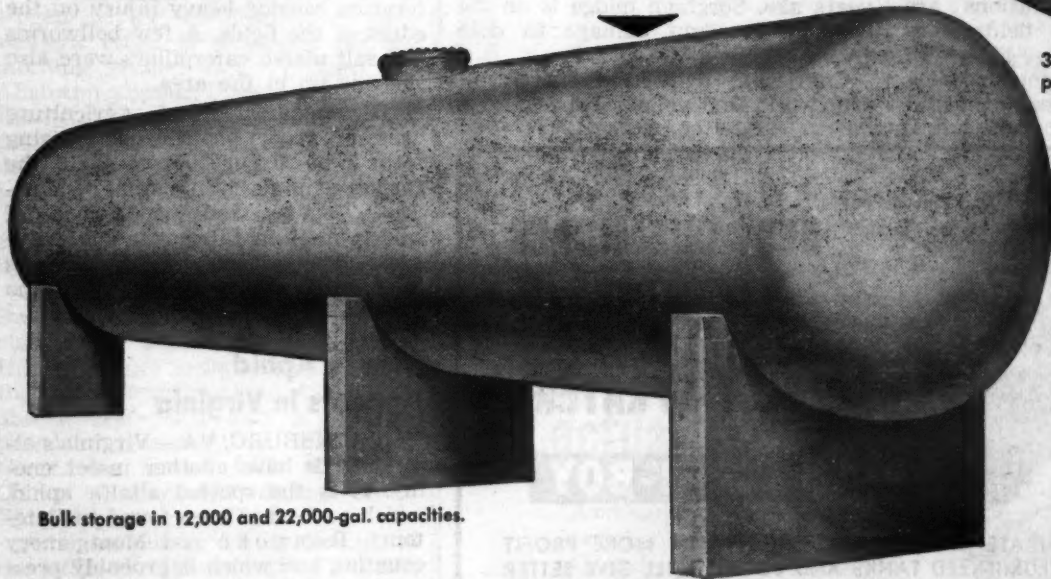
On tomatoes, sprays in the same area showed promise, but even more effective was the use of two pounds of zinc sulfate in 100 gallons of transplant water when seedlings were put in the field, Mr. Lingle said.

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INSECT, PLANT DISEASE NOTES

California Holds Hearing On Celery Disease

SACRAMENTO—The California Department of Agriculture held a public hearing Aug. 30 in Los Angeles to consider proposed changes in the department's regulations pertaining to host-free districts and periods for control of western celery mosaic disease.

The hearing was called by the department upon petition of 21 celery growers and nursery operators representing 568 acres of field grown celery in the Venice-Sawtelle area. They request that the allowable growing season for celery in the district be changed to Oct. 1 through June 30.

Cotton Insects Active In New Mexico

STATE COLLEGE, N.M.—Cotton bollworms are increasing in Dona Ana County. Several fields showed moderate to heavy damage in the week ended Aug. 30. Bollworms are general in cotton in Eddy and Chaves counties, while infestations in Curry, Quay and De Baca counties are very light.

Cotton leafworm infestations are spotty with some fields heavily infested in Dona Ana, Eddy and Chaves counties. Light infestations were found in Curry, Quay and De Baca counties. One field in Quay County averaged one pupa per plant but very few worms were present.

Cabbage looper infestations are also spotty with a few fields moderately damaged. Lygus bugs are causing damage to cotton in most cotton growing areas. Heavy infesta-

tions are reported in Dona Ana County.

Tomato hornworms and fruitworms are causing light to moderate damage to 300 acres of tomatoes in Luna County. Infestations in Dona Ana County are under control. Cabbage loopers are damaging seedling stands of lettuce in Dona Ana County. Leaf miners are also infesting seedling lettuce in Dona Ana County.

Spotted alfalfa aphid infestations are light over most of the state. Populations in Dona Ana County have increased slightly but no damaging infestations have been reported. Alfalfa butterflies are numerous in alfalfa and one damaging infestation of caterpillars was reported in Eddy County.—John J. Durkin.

Variety of Insects In South Carolina

CLEMSON, S.C.—Weevil population was sufficiently high to justify control operations at foot of mountains during the week ended Aug. 29. Spotted alfalfa aphid was reported at Clemson.

Lesser cornstalk borer has damaged cowpeas and soybeans in Barnwell County. A good crop of armyworms is reported in Saluda. Velvetbean caterpillar is being caught in Charleston trap light. Several caterpillars, including corn earworm, have damaged soybeans in an area from Bennettsville to the coast.

Lespedeza webworm is unusually abundant in Chesterfield County, but almost absent in the Clemson area where serious damage occurred three years ago. Sorghum midge is on the wing, with slight damage to date (Aug. 29).

Charleston light trap shows fall armyworm and yellow-striped army-

worm continue to increase. An unusually heavy catch of southern potato wireworm was reported. Florence light trap shows armyworm, yellow striped armyworm and corn earworm abundant. Catch of corn earworm and cabbage looper declines. Clemson light trap shows noticeable decrease in armyworms.

Arizona Insect Picture Brightens

PHOENIX—The insect picture in Maricopa County has brightened considerably. Loopers, beet armyworms, leaf perforators, bollworms and minor outbreaks of leaf rollers were reported. A few fields are infested with some of these mentioned insects but where proper application of the right insecticides has been made good results were secured.

In Pinal County Lygus counts range from 5 to 10 in Maricopa, West Coolidge and Stanfield and from 5 to 15 in Casa Grande and Eloy with East Coolidge and Magma running 10 to 25. Some bollworms are being found in Maricopa, Stanfield, Casa Grande and Magma. Leaf perforator damage is severe in Maricopa, Stanfield and in some fields in the Eloy area. Looper worms and scattered leaf perforators are of major concern in Eloy, Stanfield and Maricopa.

Lygus are still plentiful in some areas of Graham County and bollworms are also appearing. Yuma County has many fields with leaf perforators causing heavy injury on the edges of the fields. A few bollworms and salt marsh caterpillars were also showing up in the area.

U.S. Department of Agriculture workers report bollworms ranging from 3 to 20 per 100 plants in the Buckeye and Perryville areas of Maricopa County, and populations of spider mites in Bilbert and Buckeye areas. The salt marsh caterpillar is also on the increase in Maricopa County.—J. N. Roney.

Alfalfa Aphid Appears in Virginia

BLACKSBURG, VA.—Virginia's alfalfa fields have another insect enemy. It is the spotted alfalfa aphid, which so far has been found in Botetourt, Roanoke and Montgomery counties, and which is probably present in many other counties, reports Arthur P. Morris, associate entomologist at Virginia Polytechnic Institute.

This is the first known appearance of the aphid in Virginia, and whether or not it will become a real threat to alfalfa production is not known, Mr. Morris says. It is possible that natural enemies, climatic conditions, and other factors may help control it. On the other hand, farmers, county agents and others are alerted and asked to check carefully for the insect.

Fruit Insects Reported in Florida

GAINESVILLE, FLA.—A leaf beetle in adult stage was collected on natal-plum at Miami, Dade County. Only one specimen was found. Black pecan aphid in the nymphal and adult stages averaging 28-43 per leaf on 100 leaves inspected was infesting pecan at Monticello, Jefferson County.

Florida wax scale in adult stage was collected on fig at South Miami, Dade County. A bush cricket in nymphal stage was collected on avocado at Miami, Dade County.

Purple scale in adult stage averaging 50 per leaf on 4 trees inspected

was collected on grapefruit at Ft. City, Hillsborough County.

The presence of many field crickets in southern Florida may presage injurious infestation in fields planted to tomatoes and other crops.—H. A. Denmark.

Cincinnati Discards Idea of Entering Fertilizer Business

CINCINNATI—This city has discarded the idea of going into the fertilizer business when its new sewage disposal plants swing into full operation in 1959. A thorough study of cost and sales factors, together with studies of records in other cities, revealed that this city can sell fertilizer only at a loss, according to A. Caster, head of the city's sewage disposal system.

Nine tons of sludge are now produced daily at the Little Miami sewage plant, and from 90 to 100 tons daily are expected to be produced at the Millcreek plant, now under construction. This sludge can either be incinerated or dried and sold as a fertilizer base.

"My analysis shows the fertilizer base would cost us \$12.50 a ton, we could sell it for only \$10 a ton," Mr. Caster said. "Furthermore, there just isn't a market for all the sludge we will be producing."

Citing the situation in other cities, Mr. Caster said Milwaukee is losing \$5.50 a ton on its sludge because cost of incineration is that much more than is the cost of the sludge produced. In Dayton, Ohio, he said, the city reported a \$11,000 profit in 1954 but the cost figures did not include disposal plant depreciation.

Nitrogen Division Announces Five New Solutions

NEW YORK—Nitrogen Division of Allied Chemical & Dye Corp. has announced production of five new concentrated nitrogen solutions which the firm says will provide fertilizer manufacturers savings on freight because of the larger nitrogen content of the solutions.

M. E. Hunter, vice president of the division, states that one of the solutions is the first to be placed on the market designed specifically for making granular fertilizers. This particular product, he says, may be used at any time of the year because of its low salting-out temperature.

In addition to the above "Nitrogen" type solutions, the company is offering two new "Uran" type solutions for manufacturers producing semi-granular and organic nitrogen fertilizer grades.

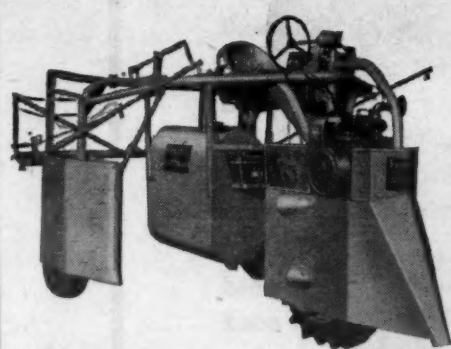
Mr. Hunter points out that production and sale of higher nitrogen granular fertilizers have grown rapidly in recent years as farmers recognize the benefits of their productivity of maintaining good drilling storage qualities. "The new solutions are designed to help meet demand by easing production difficulties in granulation, in addition improving the quality of all registered grades," Mr. Hunter states.

Farm of Tomorrow Planned in Missouri

COLUMBIA, MO.—The University of Missouri has announced plans to convert 1,240 acres in Grundy County into a "farm of tomorrow."

The farm will be used as a plant, with studies scheduled on organic residues, new insecticides, herbicides, fertilizers and farm machinery. Part of the farm will be under irrigation. Maximum production will be sought.

Sam Rowe, who recently named associate professor of animal husbandry at the university, will be superintendent in charge of the farm.



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Illinois Test Plots Produce 70 Bu. Wheat

CHICAGO, ILL. — Wheat yields as high as 70 bu. on individual fields were produced this summer on 27 demonstration farms in six central Illinois counties.

Starting in 1953, individual farmers have been keeping records in cooperation with the University of Illinois Extension Service to measure progress and results obtained by a balanced fertilization program and good management practices in this claypan area.

Object of the test-demonstration project is to demonstrate possibilities of increasing production and earning possibilities of local farms of that area, reports J. Cunningham, farm management extension specialist at the University of Illinois, who is in charge of the project.

"We are proud of the results on demonstration farms," explains Cunningham. "Almost every yield is a new record for the farm and the neighborhood."

Some of the reports seem fantastic when we think of yields 20 years ago, he admits. Improved varieties, better fertilization and improved techniques have been responsible.

The test-demonstration farm program emphasizes total farm yield per acre rather than yield for a few acres on a farm. Examples of high-yielding farms are Hancle Dunahee, Clay County, with 61 bu. on 36 acres; Charles Lynch, Edwards County, 65 bu. on 42 acres; William Rentfro, DeWitt County, 51 bu. on 15 acres; Mrs. Buzzard, Fayette County, 56 bu. on 75 acres; Hopkins and Reeves, Madison County, 52 bu. on 42 acres; Paul Buss, Richland County, 47 bu. on 43 acres.

Experience on the test-demonstration farms suggests this procedure for a wheat yields: select the best varieties; fertilize according to test, production goals and pocketbook; and use good cultural practices.

Test demonstrators attribute their high yields to a balanced fertilization program and the use of high-analysis fertilizer as 20-0-0, 0-62-0 and 33-0-0.

In general, they used from 100 to 150 lb. of 20-52-0 on land that had already had a building treatment of phosphorus. The demonstrators like high-analysis fertilizer because (1) it is less per unit of plant food and (2) they have fewer pounds of material to lift per acre to get the desired results, Mr. Cunningham said.

Researchers Develop New Weather Instruments

MADISON, WIS. — Agricultural researchers at the University of Wisconsin are developing instruments that can be set up in farm fields to give more useful information for agriculture. Working on these instruments are V. E. Suomi and C. Tanner.

Mr. Suomi and Mr. Tanner have developed four pieces of equipment which require only one observation and can be easily cared for. Next year, they'll package these instruments for use in Kansas, Ohio, and Wisconsin.

These instruments give maximum and minimum dew points, a record of hourly temperatures in the top inches of soil, total wind measurements close to the ground, and the important measure of net radiation which is used for calculating evaporation from soil.

ATLAS OFFICER RETIRES

WILMINGTON, DEL. — Kenneth Brown, vice president and director of Atlas Powder Co., retired Aug. 31 after 38 years' service.

National Nitrogen Solutions Assn. Plans October Meeting

CHICAGO — The annual meeting and trade show of the National Nitrogen Solutions Assn. will be held at the Sioux City, Iowa, Auditorium, Oct. 16-17, with the board of directors meeting the evening of Oct. 15.

George H. Serviss, G.L.F. Soil Building Service of Ithaca, N.Y. is chairman of the program committee, and William B. Spargur, Delavan Manufacturing Co., West Des Moines, Iowa, is in charge of the 1956 exhibit.

John D. Waugh, director of advertising for the Nitrogen Division of Allied Chemical & Dye Corp. will speak on "Effective Use of Advertising;" Raoul Allstetter, vice president of the National Plant Food Institute has chosen the subject "Production of Fertilizer Nitrogen;" and A. V. Slack, chief of the program development staff, division of chemical development, Tennessee Valley Authority will talk on "Liquid Complete Fertilizers."

It is expected that a representative of the department of agronomy, Iowa State College of Agriculture and Mechanical Arts will be present to discuss the place of nitrogen in the fertilization of midwestern crops.

The exhibits will be open from 9 a.m. to 5 p.m. on both days. First session of the annual meeting will be opened at 1:30 p.m., Oct. 16, following luncheon, with a message of welcome by Mayor George Young of Sioux City. Wayne R. Johnson, Shenandoah, Iowa, president of the association, will make his official report, followed by Mr. Waugh's presentation.

The discussion of the place of nitrogen in the fertilization of midwestern crops is scheduled for the morning session Oct. 17, with Dr. Allstetter and Mr. Slack appearing on the afternoon program. Each of the principal talks will be followed by a dealer panel discussion, which will be open to all members in attendance.

The annual dinner will be held in the evening of Oct. 17, to be followed by a program of entertainment.

Mr. Allstetter is a graduate of Swarthmore College where he specialized in chemistry and physics. His experience includes 11 years with the U.S. Department of Agriculture and several years with a fertilizer producing company on the Pacific Coast. He served with the Army Corps of Engineers during World War II.

After serving as deputy director of the Office of Materials and Facilities, in charge of fertilizers and agricultural chemical programs, for the U.S. Department of Agriculture, he became associated with the National Plant Food Institute.

1957 Upland Cotton Quota and Acreage Allotment Proclaimed

WASHINGTON — A national marketing quota of 11,014,493 bales (standard bales of 500 lb. gross weight) and a national acreage allotment of 17,391,304 acres for the 1957 crop of upland cotton were proclaimed Aug. 31 by Ezra Taft Benson, secretary of agriculture.

In accordance with recent provisions of law, the national acreage allotment is the same as for the 1956 crop and the national marketing quota has been set at the number of bales required to provide an acreage allotment of this size.

JUST BEGINNING

GAINESVILLE, FLA. — Despite all the dramatic advances in the use of antibiotics in agriculture, we have only begun to explore the possibilities in this field, according to Dr. J. R. Beckenbach, director of the University of Florida Agricultural Experiment Stations.



NEW GRANULE

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CSC AMMONIUM NITRATE SPREADS EVENLY

These low-moisture granules always flow freely, spread evenly, and stay put after spreading. When you use nitrogen to maintain top yield per acre, CSC Ammonium Nitrate is an excellent source. A minimum of 33.5% nitrogen is guaranteed — half is nitrate nitrogen for rapid early growth, and half is ammonia nitrogen for steady, continued growth.

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photograph of new granule CSC Ammonium Nitrate shows the exclusive, controlled particle size. Granules are specially coated to prevent lumping or caking. Your hopper holds more nitrogen with new high density granules. Storage is guaranteed under normal conditions for one year. Sturdy, easy-to-handle, 6-ply bag keeps granules ready to flow freely.

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NITROGEN the Heart of the Harvest

Increased Fertilizer, Lime Use Stressed At Meeting of South Carolina Society

CLEMSON, S.C.—The use of increased amounts of commercial fertilizer in crop production, the importance of soil testing and the use of lime to correct soil acidity were emphasized here at the seventh annual meeting of the South Carolina Plant Food Educational Society Aug. 30. The society also elected officers for the coming year.

Speakers at a full afternoon session included Dr. G. H. Collings, head, Clemson agronomy department; Dr. Frank Boyd, agronomist, Virginia-Carolina Chemical Corp., Montgomery, Ala.; Dr. Russell Coleman, executive vice president, National Plant Food Institute, Washington, D.C., and a panel composed of Hugh A. Woodle, leader, Clemson agronomy extension work; Dr. H. P. Cooper, professor of agronomy, Clemson; Fred W. Atkinson, Hartsville; D. H. Banks, St. Matthews, and Dunbar Oswald, Allendale. C. S. Reed, vice president, Duke Power Co., Charlotte, N.C., was the banquet speaker.

Henry E. Gifford, Columbia, president of the society, presided at the afternoon session, and C. G. Cushman, leader, Clemson dairy extension work, was master of ceremonies at the banquet. Marlin H. Bruner, forester, Clemson land use area, extended the welcome.

Dr. Collings briefly outlined the activities and plans of the Clemson agronomy department in the fields of teaching, extension and research. He called attention to the department's research program in crop production, plant breeding, soil fertilization, soil testing and soil microbiology.

Dr. Boyd stressed the need for soil testing to determine the plant food needs of the soil and also to determine the acidity of the soil. He emphasized that fertilizers will not function properly in acid soils.

Dr. Coleman pointed out that fertilizers will play an important part in the Soil Bank program by helping maintain soil fertility on a permanent basis, by helping to increase farm income and by helping to reduce farm surpluses, these are the main objectives of the program.

Mr. Woodle stressed the need to use more lime, Dr. Cooper suggested the use of phosphorus to control bloat of animals, Mr. Atkinson suggested the elimination of low grades of fertilizer. Mr. Banks advised the use of large amounts of fertilizer per acre for more profitable crop production and Mr. Oswald pointed out

that fertilization of Coastal Bermuda pays.

New Officers of the society are J. N. Davis, Leesville, president; J. G. Calhoun, Hartsville, vice president, and Alfred S. Gramling, Columbia, secretary-treasurer. New directors elected are A. T. Curtis, Charleston; Mr. Davis; Rupert Fullon, Columbia; Robert Richards, Columbia, and Marvin Brown, Sumter.

Program Announced For Fertilizer Control Officials Meeting

WASHINGTON—The program for the annual meeting of the Association of American Fertilizer Control Officials, to be held Oct. 18-19 at the Shoreham Hotel, Washington, has been announced by B. D. Cloaninger, Clemson, S.C., secretary-treasurer.

The meeting will get underway the evening of Oct. 18, with the formal program scheduled to begin the morning of Oct. 19 with a report by Mr. Cloaninger. Following, on the morning program, will be:

An address, "Industries—Large and Small—Make America," by Dr. M. P. Etheredge, State College, Miss., president of the association; "Industry Is Serving the Public Interest," Hugo Riemer, Nitrogen Division, Allied Chemical & Dye Corp., New York; an address by Dr. Russell Coleman, executive vice president of the National Plant Food Institute, Washington; "Reducing the Oxides," W. F. Price, Swift & Co., Chicago, and "Functions of the Land Grant College," Dr. R. F. Poole, president of Clemson A&M College.

Dr. Paul Sanders, editor of the Southern Planter, Richmond, will be the principal speaker at the luncheon. He will be introduced by Paul Truitt, executive vice president of the National Plant Food Institute, Washington.

The afternoon session will include an address on "Sampling Commercial Fertilizers," by Dr. F. W. Quackenbush, Lafayette, Ind.; a report on results of a survey of agronomists and horticulturists on changing from oxide to elemental basis for phosphorus and potassium; reports of investigators and of committees and election of officers.

California Yield Prospects Above Average

SACRAMENTO—California field crops made satisfactory seasonal development in July and yield prospects on Aug. 1 were above average, except for flaxseed and hops, the California Crop and Livestock Reporting Service has reported.

Wheat production was estimated at 8,442,000 bu. Last year 8,883,000 bu. were produced and the 10-year (1945-54) average is 11,319,000 bu. With the average yield estimated at 18.8 bu. per acre, this year's smaller production is reported due to reduced acreage for harvest.

California barley production is estimated at 69,844,000 bu., slightly more than the 68,925,000 bu. produced in 1955. The 10-year average is 52,677,000 bu. The estimated yield is 38 bu. per acre, equal to the record high yield established in 1954 and well above the average yield of 33 bu.

The service estimated oats production at 5,828,000 bu. as compared with 5,632,000 bu. in 1955 and a 10-year average of 5,394,000 bu.

Corn production is forecast at 14,040,000 bu. or 13% less than the record high of 16,170,000 bu. produced in 1955.

Pennsylvania Scientists Identify Phosphate Carrying Compound

STORRS, CONN.—Discovery of the major compound which carries phosphate from the roots to the leaves in plants was reported by workers of the Pennsylvania Agricultural Experiment Station at meetings of the American Institute of Biological Sciences at Storrs, Conn., Aug. 26-30. Technical papers on the subject were reported at the American Society of Plant Physiologists section.

Phosphates have long been known to be major nutrients of plants but the movement of the material from soil, through the roots and up into the growing plant, has perplexed scientists for decades. By using radioactive materials, Dr. A. A. Benson and a graduate student, J. V. Maizel, found that phosphoryl choline was the compound carrying the phosphates.

They describe phosphoryl choline as "a small molecule with a unique capacity for neutralizing the negative charge of phosphate." They explained that the electrically neutral compound is able to pass through plant cell membranes much more readily than its charged precursors, phosphate and choline.

This compound previously had been known as a component of animal fats. It serves as an important constituent of nerve sheaths in animals. Never before had the compound been identified in plants.

When plant roots were immersed in radioactive phosphate nutrients, the investigators discovered phosphoryl choline appearing in the stem within three minutes and the radioactivity moved rapidly to the leaves. Further work permitted the new compound to be chemically synthesized with radio-phosphorus in the laboratory. In the new form, the compound was readily utilized by plants.

This discovery is viewed as explaining part of the mystery which previously surrounded the rapid transport of the phosphate molecule.

CHEMICAL DRYING

AMES, IOWA—Chemical foliage driers may increase birdsfoot trefoil seed yields in Iowa, S. C. Wiggans, Iowa State College agronomist, says. The use of desiccants has shown promise through three years of study at the Iowa Agricultural Experiment Station at Ames and Ankeny. In 1954 trials, desiccant treated plantings yielded 143, 119, and 131 lb. of seed per acre. Control plots receiving no treatment returned 87 and 116 lb. per acre.



Lawrence M. Ferguson

VULCAN PROMOTION—Lawrence M. Ferguson, an 18-year veteran of Vulcan Containers, Inc., of Bellwood, Ill., has been promoted to sales manager, it was announced recently. Herbert B. Scharbach, vice president for sales, Mr. Ferguson has been instrumental in the research and development of the company's techniques in varied coatings for the interior of steel shipping pails.

California Sales Show Gain in Second Quarter

SACRAMENTO—Fertilizer sales in California during the three months ended June 30 totaled 433,904 tons compared with 389,352 tons during the corresponding quarter in 1955, according to a report by Allen Lemmon, chief of the Bureau of Chemistry.

Sales in the 1956 quarter included 358,524 tons of materials and 75,380 tons of dry mixed goods. Comparative figures for the 1955 quarter are 370,200 tons of materials and 68,650 tons of mixed goods.

Sales of agricultural minerals in the second quarter of 1956 totaled 122,935 tons, a gain from 110,429 tons in the 1955 quarter.

CORN FIELD DAYS

EAST LANSING, MICH.—The corn field days are slated for September in Michigan. The events are scheduled at the farms of Richard Marshall, near Albion in Calhoun County Oct. 2, Coats & Son, near Coopersville in Barry County Oct. 4, and Lynn Street, near Yale in St. Clair County Oct. 9.

Now the New HOFFER SOIL SAMPLER

with exclusive probe cup

- 2 The Hoffer Soil Sampler makes it easy to obtain accurate soil samples with undistorted cores for soil testing. The secret is the Hoffer design.
- 4 • Cutting tip and tube that resists blunting, bending or twisting.
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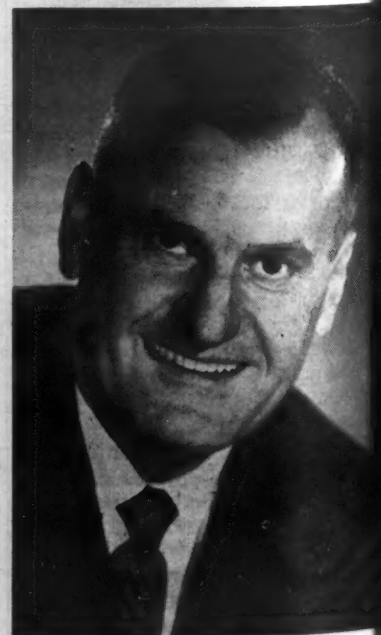
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Lloyd L. Fusby



Roger W. Hinchman

PACIFIC COAST BORAX APPOINTMENTS—Lloyd L. Fusby has been named western manager and Roger W. Hinchman general sales manager of Pacific Coast Borax Co. division of U.S. Borax and Chemical Corp. Mr. Fusby has over-all responsibility for production at Wilmington and Boron as well as related activities of the division, while Mr. Hinchman will have charge of the division's industrial and agricultural departments, both east and west.

fertilizer
USS Balance Sheet for bigger corn yields

NITROGEN (N) **PHOSPHATE (P₂O₅)** **POTASH (K₂O)**

Total N you need _____ lb/acre
 Multiply yield you want _____ bu/acre
 by *2.5 lb/bu

ADD

Multiply your soil factor by
 your organic matter test result
 Sandy soil 30 Silt loam 25
 Clay soil 30 Direct soil test

N from plowed-down crop residues
 Alfalfa grass 60 lb/acre
 Clover grass 30 lb/acre
 Muehlenberg 10 lb/acre
 Sorghum, etc. 30 lb/acre

N from manure
 Multiply number of tons by 5

N from starter fertilizer
 Multiply pounds of fertilizer
 by % of N content

TOTAL N ON HAND

ADDITIONAL N YOU NEED
 Subtract B from A

PHOSPHATE (P₂O₅)

Total P₂O₅ you need _____ lb/acre
 Multiply yield you want _____ bu/acre
 by *1.5 lb/bu

ADD

Enter the pounds of P₂O₅ from
 your soil test

or
 Multiply pounds of P by 2.3

P₂O₅ from plowed-down crop residues
 Alfalfa grass 30 lb/acre
 Clover grass 15 lb/acre
 Muehlenberg 5 lb/acre
 Sorghum, etc. 25 lb/acre

P₂O₅ from manure
 Multiply number of tons by 2

P₂O₅ from starter fertilizer
 Multiply pounds of fertilizer
 by % of P₂O₅ content

TOTAL P₂O₅ ON HAND

ADDITIONAL P₂O₅ YOU NEED
 Subtract B from A

POTASH (K₂O)

Total K₂O you need _____ lb/acre
 Multiply yield you want _____ bu/acre
 by *3.0 lb/bu

ADD

Enter pounds of K₂O from your soil test
 or
 Multiply pounds of K by 1.2

K₂O from plowed-down crop residues
 Alfalfa grass 60 lb/acre
 Clover grass 30 lb/acre
 Muehlenberg 10 lb/acre
 Sorghum, etc. 30 lb/acre

K₂O from manure
 Multiply number of tons by 7

K₂O from starter fertilizer
 Multiply pounds of fertilizer
 by % of K₂O content

TOTAL K₂O ON HAND

ADDITIONAL K₂O YOU NEED
 Subtract B from A

use this balance sheet correctly

The Balance Sheet is simply a good tool to help you do a better job of raising the best corn crop most efficiently. Like any tool, it must be used correctly. It is to work right there are the simple steps to follow:

1. Have a soil sample from your corn field tested at the state soils lab or some other dependable soil testing agency.
2. Insert the figures from the test results in the proper places on the Balance Sheet and complete the simple calculations.
3. With your fertilizer dealer, county agent, or agriculture teacher, work out the most economical way of applying the needed fertilizer (as simple, bulk mix, mixed goods, etc.) and fill in the blank titled "Suggested Fertilizer Program."
4. On the field, apply the full amount of time if any has been recommended in the soil test.
5. Apply the fertilizer as planned on the Balance Sheet.
6. Plant enough corn to produce the desired yield. It takes about 120 plants to produce a bushel of shelled corn.
7. Make a yield check—don't guess! Your dealer, together with county agent will supply you with the simple directions.

SUGGESTED FERTILIZER PROGRAM

Row down or side dress Bulk Mix or Simple

☐ Ammonium Sulfate (Multiply N you need by 5)

☐ Super Phosphate or Triple Super Phosphate

☐ Muriate of Potash or Potassium Sulfate

Mixed Goods

☐ Mixed Fertilizer Formula

My corn yield for 1955 _____ bu/acre

Please check one
☐ I used bulk fertilizer
☐ I used bagged fertilizer

Name _____

Address _____

State _____

*These figures are average requirements per bushel. These requirements may vary from 2 to 3 lbs. depending on growing area. See your County Agent or the Ag. Instructor for more details.

Here's how to help your customers . . . and yourself!

Balanced fertility isn't a "by-guess-and-by-golly" proposition. To get the most out of fertilizer, soil and crop needs must be figured accurately. That's why United States Steel agronomists have prepared the "USS Fertilizer Balance Sheet."

Now you can help your customers work out fertilizer needs for their crops. This balance sheet shows a simple method of evaluating the N, P and K already in the soil as a result of residues, plow downs and manure, as against the quantities needed for profitable yields. By working out a farmer's fertilizer needs *right in your own store*, you have ready-made

sales to customers who are fully aware of what it will take to produce good yields. It will be a good booster for fall fertilizer sales.

The "USS Fertilizer Balance Sheet" is another example of how United States Steel, maker of USS Ammonium Sulfate, helps dealers make greater sales through better service. The balance sheet comes in pads of 50. Send in, today.



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Please send me pads of the new "USS Fertilizer Balance Sheet." (Each pad contains enough balance sheets for 25 farmers.)

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COMPANY

ADDRESS

CITY STATE

UNITED STATES STEEL

MEDFLY

(Continued from page 1)

300,000 acres. Fly populations have been drastically reduced. Between the fifth and sixth sprayings, some 1,300 traps in Miami caught about 1 fly per 100 trap-days, compared to 300 flies caught per 100 trap-days before the first spraying. However, adult flies were recovered in traps at 20 locations in the greater Miami area following the fifth spraying.

More insecticidal bait spray is being applied to clear up pockets of infestation, where rain wash-off or other factors may have reduced the spray's killing power, USDA said. Control officials continue intensive fruit-cutting (for detection of larvae) and trapping of adult flies to learn the results of the recently completed sixth spraying.

The fly has been found in 27

Florida counties since its discovery in the state April 13. Most of the 1,392 properties infested (as of Aug. 23) are in Dade, Broward, Palm Beach, Lee and Pinellas counties. These counties, along with Hendry and Collier, are under federal quarantine.

At least a few flies have been found at points in every county south of and including Pasco, Polk, Lake, Seminole and Brevard counties. The most southerly find recorded was at Key West, where a single fly was trapped.

Movement of products from lightly infested areas not under federal quarantine is regulated by the state of Florida, and each isolated infestation is promptly treated with poison-bait spray and kept under surveil-

lance. No flies have been found in such spots after treatment has been completed. Despite intensified surveys as more traps reached Florida, discovery of new spot infestations has decidedly decreased since Aug. 1.

Entirely safe procedures for movement of the heavy fruit and vegetable crop anticipated in Florida in the 1956-57 season are being worked out in conferences between state and USDA pest control personnel and growers, packers and shippers. A number of fumigation chambers, some containing almost 6,000 cubic feet of space, are being built or remodeled to specifications provided by quarantine officials. Many of the larger citrus packers are converting "degreening" rooms to fumigation chambers.

Road blocks aimed against accidental spread of the pest have been employed at points presenting greatest hazard of movement of untreated fruits and vegetables. At present, ten blocks are operating in the Pinellas

and Hillsborough counties area, mid-August, about 2½ million vehicles had been inspected at Florida road blocks.

A roving patrol inspects train, and air terminals for passengers that may carry host fruits of the fly, though there has been a decided drop in the amount of host material per try to take out, enough fruit is intercepted or turned back to make operation worthwhile. Half the cars searched in boat traffic inspection at Stuart, in Martin county, carry of traband material.

More than half a million acres have been sprayed with baited insecticide in the Medfly program. All of these acres received repeated treatments. Cumulative aerial bait spray applications—including the many multiple applications given most areas—have now passed the 2½-million-acre mark.

Single engine aircraft sprayed most 1½ million acres, and multi-engine planes treated most of the remainder. Jeep-mounted hydraulic and blower-type sprayers and hand sprayers also applied bait spray. In addition, one-time surface applications of granular insecticide to have been made with hand seeders on several thousand acres to supplement the aerial sprays. Granular insecticide was also applied by aircraft to small acreages in groves.

Florida is covered from end to end by some 25,000 plastic traps—from the Florida Keys north almost to Georgia state line. They are baited with oil of angelica seed, a strong attractant for male flies.

Plant quarantine and pest control personnel of USDA's Agricultural Research Service, working closely with affected states, plan to trap for the fly in the vicinity of sea, air and border ports, and in areas where host fruits are produced, in states along the South Atlantic and Gulf Coast and the Mexican border. Routine trapping will continue indefinitely, a regular plant-quarantine operation, a precaution against reentry of the pest from outside the United States.

At the invitation of the minister of agriculture of Jamaica, USDA plant quarantine inspectors will head a cooperative survey for the fly on that island this fall. It is hoped that the survey will be in operation there by mid-September. Such cooperative surveys will be conducted on other islands in the Caribbean if their governments request them.

Extensive cooperative surveys of Central America, conducted under USDA leadership earlier this summer, disclosed no Mediterranean fruit flies outside of Costa Rica, where the pest was found in April 1955, just a year before its discovery in Florida.

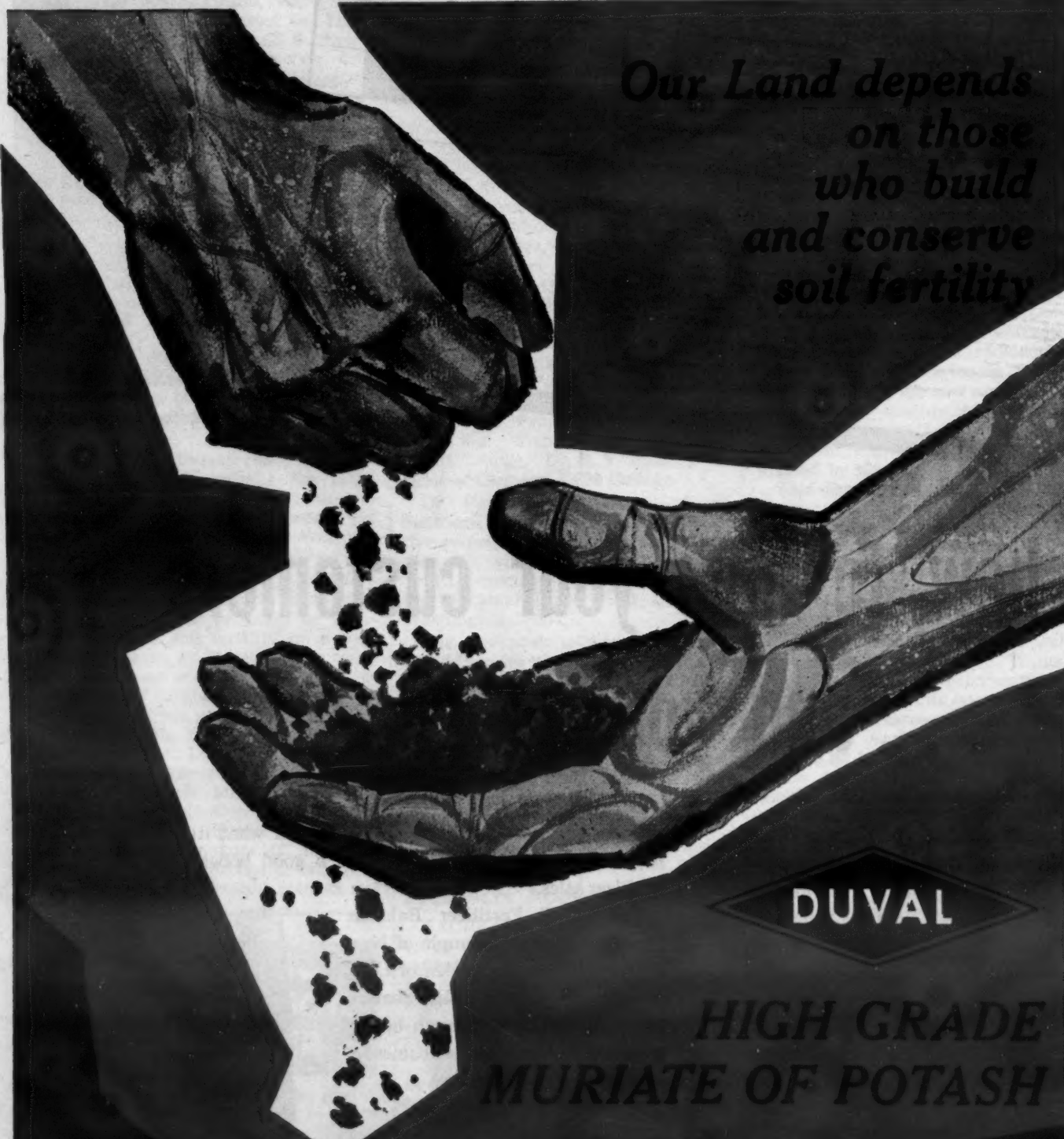
An Army helicopter and boats have scattered traps in the hard-to-reach Ten Thousand Island group off the lower west coast of Florida. Fly checks revealed the fly's presence on three islands. The job of checking the wilderness area is being carried by USDA boat patrols engaged in wild cotton eradication for control of the pink bollworm.

Eighteen trappers are working some 8,000 square miles of the Everglades, fanning out from the Lake Okeechobee area. No flies have been found there or on islands in Lake Okeechobee.

Headquarters for cooperative federal-state control activities against the pest have been moved from Miami to Winter Haven, center of USDA's plant pest control program in Florida.

MORE GRASS SEED

STILLWATER, OKLA.—Seed yields from blue panic grass can be increased by nitrogen fertilization trials at the Oklahoma Agricultural Experiment Station indicate. In 1955 seed yields increased steadily as nitrogen rates increased up to 720 per acre.



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who build
and conserve
soil fertility*

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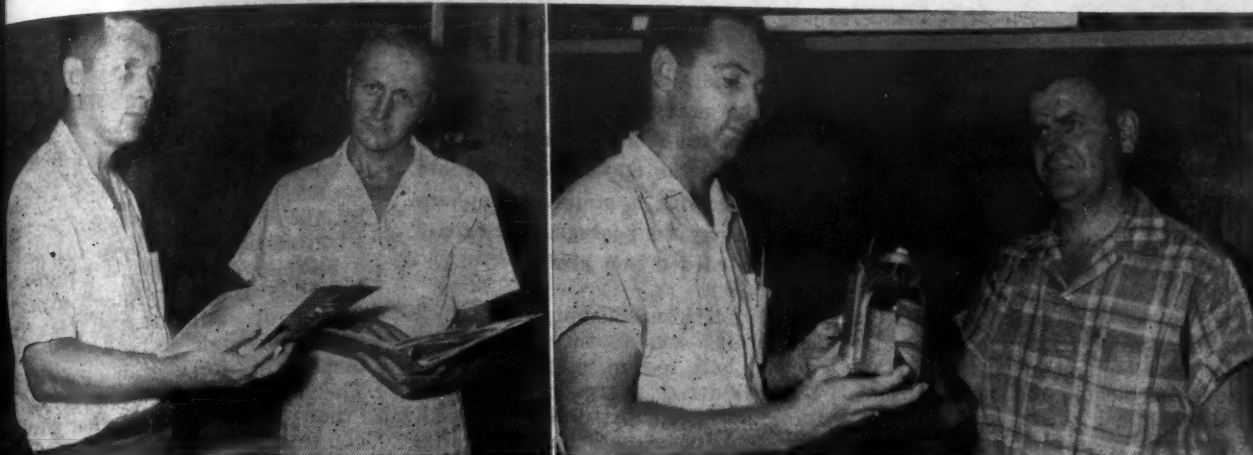
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Special Retail Section

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**Richer
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A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW



DADE COUNTY SCHOOL—Shown above are scenes of the garden supply dealers' school being held in Miami, Fla. In the left photo, Douglas Knapp, left, assistant Dade county agent, and Jack Nemeth, West Miami Feed Store, discuss fertilizers and store management. Mr. Nemeth

is a wholesale and retail dealer in feeds, seeds, fertilizer and garden supplies. In the photo at the right Bill Spears, left, salesman for Collins Feed and Supply Co., Miami, and James Brogdon, Florida agricultural extension entomologist, discuss merits of spray equipment.

School for Farm, Garden Supply Dealers in Dade County, Florida, Proves Popular

MIAMI—Farm supply manufacturers, distributors, dealers and retailers are finding a garden supply dealers' school offered by the Florida Agricultural Extension Service through the Dade County agricultural agent to be helpful in many ways.

W. D. Horton, a partner in the Collins Feed and Supply Co. of Miami, says: "Something like this should have been done long ago. Dade County is growing rapidly with many new dealers, and many new products are being sold in farm supply stores. Until now there has been no coordinated program to keep the dealers up-to-date as to the benefits or the hazards of the materials they handle."

"Many new feeds, fertilizers and insecticides are coming on the market, and the public is sometimes acquiring some misinformation. Our salesmen make every effort to keep retail dealers informed, but we cannot educate them all. This course should prove helpful to all phases of the industry."

Jack Nemeth, proprietor of West Miami Feed Store, says: "I am gaining much valuable information regarding soils, fertilizers and their uses, by attending this series of classes. I have not missed a one, and feel that this is a very good thing for the trade."

Douglas M. Knapp, assistant county agent, acting as coordinator of the school, sent letters announcing the course to feed supply houses, fertilizer dealers, manufacturers and distributors of garden supply items, garden supply dealers, pest control services and other related industries.

These letters listed the subject matter to be covered in the 13 lessons to be taught each Monday night, July 9 through Oct. 1. Subjects include plant names, plant anatomy, plant nutrition, soils, insects, insecticides, fungus diseases, fungicides, nematodes, weeds, fruits, lawn grasses, flowers, vegetables, garden tools and merchandising of farm supplies.

Although this is the first known attempt of a county agent to hold a school of this type, acceptance was enthusiastic, with about 75 people registering for the course. The only cost of registration was \$2 to cover materials used in the course. These materials include an attractive loose-

leaf notebook for each student. At each class, mimeographed copies of talks and other pertinent literature are added to the notebooks.

A list of publications available from the extension service is also posted at the school, and students are urged to write in for free literature giving useful information applicable to their line of business.

The teaching staff is made up of experts which include personnel from the county agent's office and specialists from the University of Florida. Color slides and charts are used to illustrate most of the lectures. These include micro photos of organisms attacking plants, and the results of use of various sprays, fertilizers and other nutrients. Many actual specimens were exhibited, and use of equipment of various types was demonstrated.

According to Mr. Knapp, the aim

of the course is to increase the professional skill of those attending, by giving them up-to-the-minute information on work being done by the agricultural extension service.

Mr. Knapp said: "Dealers can do a lot of good by providing their customers with accurate information. Many people come into a store and are able to give only vague descriptions of the symptoms with which their plants are troubled. If the dealer has made a study of the subject, he will be able to give his customer confidence in his business and his product, by indicating familiarity with the problem. Needless to say, the dealer should not show lack of knowledge, give the wrong information or merely tell the customer to read the instructions on the package."



SHOP TALK

OVER THE COUNTER

FOR THE DEALER

By EMMET J. HOFFMAN
Croplife Merchandising Editor

The average farm supply store has neither sufficient personnel nor facilities to prepare a thorough indoctrination program for acquainting new employees with their work routines.

Often the bewildered new employee is greeted briefly by the manager on the first day of work and turned over to one of the store's old hands whose temperament and qualifications make him a poor teacher, a worse example and an undesirable counselor.

One farm supply store has solved the situation partly with the preparation of a mimeographed "basic information sheet." The sheet is given to the employee prior to his first day on the job and does much to give him the proper mental attitude toward his new job. The "basic information sheet" is reprinted here in full:

"Our store has been set up to help each of us earn a good living. It can do that only through hard work, and team work, on the part of each employee. It must satisfy and please an ever-increasing number of customers and not just take care of its old customers.

"Your future in this business can

be as bright as you wish to make it. There will always be a basic need for our products. There are always new ideas being developed to bring people to the use of our products. The future of any individual is determined by his or her desire to succeed.

"Good selling habits are basic in the making of a good salesman. The quicker they are learned the more

(Continued on page 14)

Alabama Store Increases Sales With Good Displays

Horace Long of the McMillan Harrison Fertilizer Co., Mobile, Ala., owns the Blue Bird Hardware & Seed Co., 2807 Spring Hill Ave., Mobile, Ala., and in that store he has some excellent fertilizer and insecticide and sprayer displays which help his store manager, Mrs. Eula Tanner, attain a sizable volume of business on the lines.

Bagged fertilizer is stacked up front in the store, also placed outside on good days when the weather is fine and is spotted at other locations inside the store. A special display unit for ingredients at the rear part of the store accounts for a great deal of small lot business.

This display unit is made of one inch wood and is 2 x 4 ft. and has four equal sized bins. The unit rests on the floor, and is 18 inches high. This means that browsers in the store can easily see what is in each bin.

Because of the store's connection with the McMillan Harrison Fertilizer Co., customers can order special fertilizer with insecticides in it, if they wish.

Many customers buy from 1 to 20 lb. of fertilizer at a time from the bins, especially in the spring.

The store also sells garden, flower and field seeds. A good volume is done on Dixie 18 corn, and quite a bit of clover and alfalfa is also sold. When customers order fertilizer in large amounts at the store when they buy seed, the order is delivered direct from the factory.

Mr. Long says that last year the factory produced about 16,000 tons of fertilizer for use in this area. No pelleted fertilizer is manufactured by the company as yet, he states. The fertilizer company also has a spreading service for farmers on bulk fertilizer.

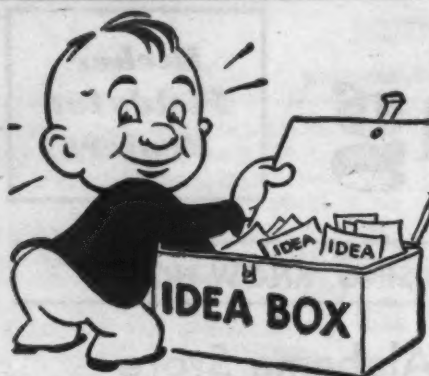
"Our experience is that the average farmer is gradually using more fertilizer every year in trying to come up to state agricultural station recommendations," says Mr. Long.

"They see that proper fertilizer applications produce bigger and better crops, and this evidence is convincing. Principal crops in the area for which fertilizer is used include corn, cotton and vegetables.

The store sells seeds in various locations in the establishment and at each some insecticides are shown, especially dusts. The idea is that when a gardener buys seeds, he might just as well buy some dust at the same time, for he will need it shortly after the plants come up. Employees usually try to suggest these dusts to most customers, and are able to get quite a few extra sales.

A fine section of hand sprayers is displayed on an island along with insecticides, and quite a few of these are also sold. When a customer comes in and asks for insecticides, the employees usually ask "Have you a good sprayer?" before the transaction is completed.

The firm schedules its newspaper advertising for each Thursday and Friday, and also does some direct mail.



What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6468—Nitrogen Solutions

A new, 48-page nitrogen solutions handbook for the fertilizer and chemical industries has been published by Nitrogen Division, Allied Chemical & Dye Corp. According to the company's announcement, the book contains up-to-date nitrogen solutions technical data and describes the chemical and physical properties of solutions and how to store, handle and use them in fertilizer manufacturing. The book also presents new information on granulation and formulation of fertilizers. Numerous formulas and conversion factors also are included. The handbook is illustrated with scenes of typical fertilizer manufacturing and solutions handling arrangements. Copies may be obtained free of charge by checking No. 6468 on the coupon and mailing it to Croplife.

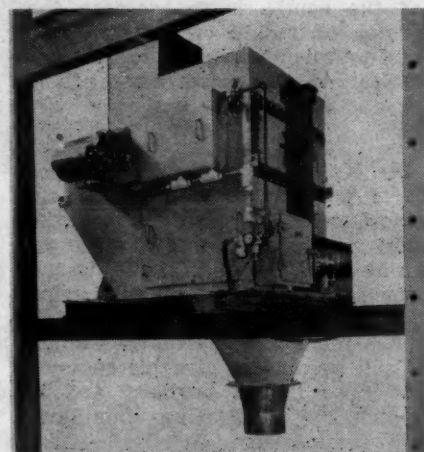
No. 6469—Carrier Data

Officials of Minerals & Chemicals Corporation of America state that detailed information on Attaclay and Granular Attaclay—carriers and diluents for pesticide dusts, wettable powders and new granular formulations—is now available in Spanish and Portuguese languages. The ma-

terial is so arranged as to be of maximum value to persons interested in the development of pesticides, fungicides, herbicides and other agricultural chemical dusts and powders. Free copies are available by checking No. 6469 on the coupon and mailing it to Croplife.

No. 6470—Fertilizer Scale

A new automatic fertilizer scale which is claimed to weigh and bag up to twenty 80-lb. bags of fertilizer a minute is announced by the Richardson Scale Co. Pilot tests have produced accuracies within 4 oz., the announcement states. Called the



HA-39 fertilizer bagger, the unit incorporates such features as a power driven belt feeder within the scale, air cylinder discharge of hopper, totally enclosed construction and stainless steel construction of all contact parts and parts exposed to fertilizer dust. Secure more complete details by checking No. 6470 on the coupon and mailing it to Croplife.

No. 6471—Tank Control Valve

Two new combinations of tank control valves for use with air pressure-operated nitrogen solution tanks have been announced by the Circle Seal Productions Co., Inc. The model P4-671 applicator tank control valve combines: A pressure regulator, to control the amount of pressure in the tank, thereby regulating the rate of application and to serve as a relief valve; an automatic vacuum relief to protect the tank against negative pressures; a manually operated bleed valve, and a check valve to protect the air compressor from corrosive ammonia vapors. A similar unit, model P4-670, incorporates the features of model P4-671 except for the pressure regulator which is replaced by a present pressure relief valve. Secure more complete details by checking No. 6471 on the coupon and mailing it to Croplife.

No. 5537—Rodent Control

New developments are reported by the Solvit Chemical Co. in its rodent control unit called Kelly's nested "see-in" Rat Cafeteria. The unit is claimed to provide savings on freight charges and storage space since the nested design enables shipment of the completely assembled unit except for a feed hopper and cover. The parts are put together with clips, without tools, and can be disassembled quickly, the company's announcement states. The unit can be used for liquid or dry poisons or both, it is explained in free literature available to readers. To secure the literature check No. 5537 on the coupon and mail it to this publication.

mixes with water to produce a spray claimed to be non-toxic and safe use around all foodstuffs. The product, known as Insekil E. C., contains pyrethrins and piperonyl butoxide and is said to produce quick knockdown and kill of a large number of flying and crawling insects. Gall and quart size containers are being used. For more information check No. 5519 on the coupon and mail to this publication.

No. 6454—Dispersant Bulletin

A seven-page technical bulletin No. 306 describing the use of Polyf sodium lignosulfonate as a moderately active dispersant in wettable insecticide powders has been published by the Polychemicals division, West Virginia Pulp & Paper Co., and available upon request. The product is made in five grades varying in degree of sulfonation. Three of the grades are said to be widely used dispersants for wettable powders. The firm's announcement states that "there are numerous other commercial and potential applications for the various grades of Polyf where dispersing agent of moderate activity is required." The bulletin describes the product in more detail and lists some of these uses. The bulletin describes properties of the product and gives instructions for preparing insecticide wettable powders. Among the formulations given are those for DDT, dieldrin, aramite, heptachlor, toxaphene and malathion. The product has also been used successfully in making wettable powders with chlordane, BHC, parathion, aldrin and Diamond Alkali K-101, it is announced. Secure the bulletin by checking No. 6454 on the coupon and mailing it to Croplife.

No. 6455—Product Bulletins

The American Potash & Chemical Corp. has issued informational product bulletins on the series of electrochemicals produced at its Henderson, Nevada, plant including sodium ampotassium chlorate, ammonium ampotassium perchlorate and manganese dioxide. Bulletins on the company's chlorates and perchlorates are intended for use by manufacturers of weed killers, defoliant and other industries. The bulletins include analysis, description and applications in various manufacturing processes of the company's electrochemicals. Secure the bulletins by checking No. 6455.

No. 6456—Fertilizer Handbook

A handbook on fertilizer management has been printed by the Kansas City Testing Laboratory as a service to fertilizer dealers and their customers and is available at a nominal cost. The 26-page booklet is a project of the soil consultant division of the 47-year-old company which was established recently to act as a completely independent soil testing facility for agricultural interests primarily in the Midwest. Several chapter headings include "General Management of Soils," "Meaning of Soil Test Values and Fertilizer Suggestions," "Fertilizer Recommendations for Various Crops" and "How to Get the Fertilizer Management Program for Your Farm." The booklets not only are suitable as a guide to dealers but may be obtained at a nominal cost for dealer customers. The firm also offers a soil sampling program for dealers. More complete details may be had by circling No. 6456 on the coupon and mailing it to Croplife.

No. 6452—Brochure

A 12-page illustrated brochure that gives information for help in controlling flies, mosquitos and other insects has been released by the Chemical Insecticide Corp. The brochure

Send me information on the items marked:

- | | |
|---|--|
| <input type="checkbox"/> No. 5519—Insecticide | <input type="checkbox"/> No. 6461—Blight Booklet |
| <input type="checkbox"/> No. 5537—Rodent Control | <input type="checkbox"/> No. 6462—Insecticide |
| <input type="checkbox"/> No. 6452—Brochure | <input type="checkbox"/> No. 6463—Burn Treatment |
| <input type="checkbox"/> No. 6454—Dispersant Bulletin | <input type="checkbox"/> No. 6464—Hopper System |
| <input type="checkbox"/> No. 6455—Product Bulletin | <input type="checkbox"/> No. 6465—Tank Lining |
| <input type="checkbox"/> No. 6456—Fertilizer Handbook | <input type="checkbox"/> No. 6466—Bagging Cost Kit |
| <input type="checkbox"/> No. 6457—Booklet | <input type="checkbox"/> No. 6468—Nitrogen Solutions |
| <input type="checkbox"/> No. 6458—Tractor Shovels | <input type="checkbox"/> No. 6469—Carrier Data |
| <input type="checkbox"/> No. 6459—Movies | <input type="checkbox"/> No. 6470—Scale |
| <input type="checkbox"/> No. 6460—Bag Design | <input type="checkbox"/> No. 6471—Valve |

NAME

COMPANY

ADDRESS

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS
PERMIT No. 2
(Sec. 34.3,
F. L. & R.)
MINNEAPOLIS,
MINN.

BUSINESS REPLY ENVELOPE

No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife

P. O. Box 67,

Reader Service Dept.

Minneapolis 1, Minn.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 5519—Insecticide

The Pest Control division, J. I. Holcomb Mfg. Co., Inc., is producing a new concentrated insecticide which the company recommends for use as a grain protectant. The product

Better Selling

Richer Sales Fields for Dealers

describes Chem-Hex T, trade name of a newly developed formulation, which contains both pyrethrum for quick kill and a neutralized form of benzene hexachloride for residual kill. It gives instructions for the use of the product in all types of sprayers and relates on its effectiveness in field tests. Secure the brochure by marking No. 6457 on the coupon and mailing it to Croplife.

No. 6457—Agricultural Chemicals

A new book designed to give a general description of the company's agricultural chemicals has been prepared by the Shell Chemical Corp. Included in the text is information concerning the uses for aldrin, dieldrin, endrin, D-D soil fumigant, magon soil fumigant and allyl alcohol. In addition to general product information, a master insect control list for the insecticides and a literature order blank are included. Where any of the company's literature, the order page may be torn out, quantities desired filled in along with the proper address. Secure the book without charge by checking No. 6457 on the coupon and mailing it to Croplife.

No. 6458—Tractor Shovels

Bulk material handling methods in fertilizer plants and other chemical industries is described in a new bulletin published by the Frank G. Hughes Co. The bulletin is entitled, "Modern Payload Tractor Shovels Industry." Specifications for the company's line of tractor shovels are included, as is a map showing the locations of the more than 200 distributors handling and servicing the company's units. A copy of the bulletin will be sent if you will check No. 6458 on the coupon and mail it to Croplife.

No. 6459—Gardening Movies

Four sound, color, 16 mm gardening movies are available for showing without charge, announces Swift & Co. officials. The four are: "Dreams Come True," (parts one and two); "Food for Thought" and "How Does Your Garden Grow?" For further information check No. 6459 on the coupon, clip and mail it to Croplife.

No. 6460—Bag Design Trends

The part played by redesigned fertilizer bags in increasing sales is emphasized by the Percy Kent Bag Co. Information concerning trends and sources in bag design developments is available from the company. Company officials state that fertilizer brand identification and brand selling are important in convincing the farmer to choose a particular product. Display advertising on the product package offers a major opportunity to the fertilizer manufacturer, it is claimed. Products in new containers—with the design revamped to look cleaner, brighter, more modern and with the product benefit clearly pictured—enjoy an unmistakable sales boost, it is stated. Secure more complete details by checking No. 6460 on the coupon and mailing it to Croplife.

No. 6461—Blight Booklet

An illustrated booklet on the recognition and treatment of early and late blight in 18 different crops is being made available by the Chem-

Bam Division, Chemical Insecticides Corp. Also described in the booklet is the company's new fungicide developed for blight treatment. Secure the booklet by checking No. 6461 on the coupon and mailing it to Croplife.

No. 6462—Insecticide

A new liquid insecticide, trade-named Drinox, has been placed on the market by Panogen, Inc. The product contains aldrin and is claimed to be "effective in protecting newly planted seed and young seedlings from attack by wireworms, seed corn maggots and a variety of other soil-dwelling insects." It is recommended for treating wheat, oats, barley, rye, cotton, corn and sorghums. Seed germination is not harmed, it is claimed, and the prod-

uct comes as a true solution (not a slurry), ready to use without mixing or diluting. For further information check No. 6462 on the coupon and mail it to this publication.

No. 6464—Hopper System

The K. E. Savage Co. has available a new bulletin which gives a description and specifications of its hopper system. According to the bulletin, the system can be placed in any fertilizer plant having bays measuring at least 12 by 12 ft. square. The system's method of operation is described and a number of pictures depict various arrangements. In the pages devoted to specifications are sections titled: Elevators, conveyors,

bin, scale, screen, swivel spout and signal panel. A number of photographs show conveyors in use. Secure the bulletin by checking No. 6464 on the coupon and mailing it to Croplife.

No. 6465—Rubber Tank Lining

A 40-page booklet describing the new Gates 50H rubber lining for chemical fertilizer storage tanks has been prepared by the Gates Rubber Co. The company asserts that the lining protects tanks against the corrosion of any chemical fertilizer solution now on the market or presently planned. Corrosion tables, proper tank selection, diagrams, spec-

(Continued on page 15)

Watch For These 3 Hard-Selling Phillips 66 Ads...

TO HELP YOU GET MORE FALL BUSINESS!



S-T-R-E-T-C-H GREEN FEED

Apply Phillips 66 Ammonium Nitrate on pastures this fall for increased beef and milk gains at lower cost!

Good pasture management calls for balanced fertilization—including phosphorus, potash and other nutrients, in addition to nitrogen.

Following good pasture management practices, apply Phillips 66 Ammonium Nitrate on your fall pastures this fall. You'll get extra weeks of grazing this fall and next spring. Grasses will be richer in protein. More succulent and palatable. Your biggest reward will be faster and bigger beef and milk gains at a lower production cost.

Benefits of nitrogen on fall-planted grain:

- Higher yields for increased profit per acre.
- Extra weeks of pasture.
- Extra grain for sale.
- Extra profit per acre.

Phillips 66 AMMONIUM NITRATE FERTILIZER

Available in 50 and 100 lb. polyethylene bags.

PHILLIPS CHEMICAL COMPANY

A Subsidiary of Phillips Petroleum Company

Bartlesville, Oklahoma

There's a big bonus in applying nitrogen in the fall to your small grains. The young plants will respond with hardy and vigorous growth, so that you can pasture your animals earlier and longer.

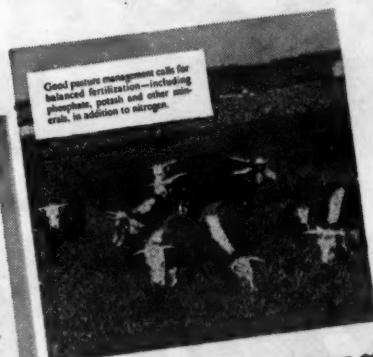
This helps to cut dry feed bills. And, because the nitrogen in the grasses protein content in the plants, you will get faster and bigger beef and milk gains—at a lower production cost per pound.

The increase in profit per acre from your harvested grain...

big reason for applying nitrogen in the fall is that it will also pay you to think about the "bonus" grazing you can get by putting down plenty of nitrogen on your fall-planted grain.

If soil tests show that your small grain land needs fertilizing, use 30 to 40 lbs. of nitrogen per acre. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

There's a big bonus in applying nitrogen in the fall to your small grains. The young plants will respond with hardy and vigorous growth, so that you can pasture your animals earlier and longer.



"BONUS" GRAZING

How fall application of Phillips 66 Ammonium Nitrate can stretch small grain pasture for extra profit!

There's a big bonus in applying nitrogen in the fall to your small grains. The young plants will respond with hardy and vigorous growth, so that you can pasture your animals earlier and longer.

This helps to cut dry feed bills. And, because the nitrogen in the grasses protein content in the plants, you will get faster and bigger beef and milk gains—at a lower production cost per pound.

The increase in profit per acre from your harvested grain...

big reason for applying nitrogen in the fall is that it will also pay you to think about the "bonus" grazing you can get by putting down plenty of nitrogen on your fall-planted grain.

If soil tests show that your small grain land needs fertilizing, use 30 to 40 lbs. of nitrogen per acre. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

There's a big bonus in applying nitrogen in the fall to your small grains. The young plants will respond with hardy and vigorous growth, so that you can pasture your animals earlier and longer.

This helps to cut dry feed bills. And, because the nitrogen in the grasses protein content in the plants, you will get faster and bigger beef and milk gains—at a lower production cost per pound.

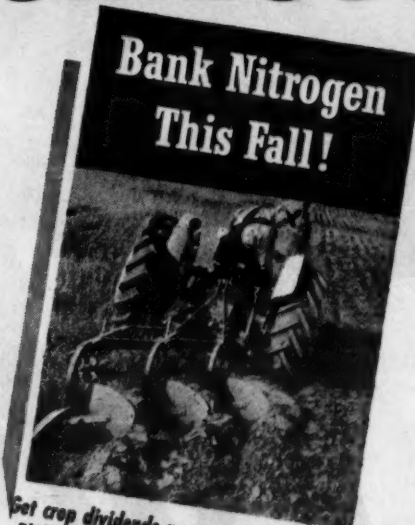
The increase in profit per acre from your harvested grain...

big reason for applying nitrogen in the fall is that it will also pay you to think about the "bonus" grazing you can get by putting down plenty of nitrogen on your fall-planted grain.

If soil tests show that your small grain land needs fertilizing, use 30 to 40 lbs. of nitrogen per acre. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

There's a big bonus in applying nitrogen in the fall to your small grains. The young plants will respond with hardy and vigorous growth, so that you can pasture your animals earlier and longer.

This helps to cut dry feed bills. And, because the nitrogen in the grasses protein content in the plants, you will get faster and bigger beef and milk gains—at a lower production cost per pound.



Bank Nitrogen This Fall!

Get crop dividends next year—plow down Phillips 66 Ammonium Nitrate this fall!

Here's why plow down Phillips 66 Ammonium Nitrate this fall: It can be one of the most profitable investments in your business of farming.

First, you'll get more nitrogen in the soil when you plow down Phillips 66 Ammonium Nitrate this fall. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

Second, you'll get more nitrogen in the soil when you plow down Phillips 66 Ammonium Nitrate this fall. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

Third, you'll get more nitrogen in the soil when you plow down Phillips 66 Ammonium Nitrate this fall. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

Fourth, you'll get more nitrogen in the soil when you plow down Phillips 66 Ammonium Nitrate this fall. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

Fifth, you'll get more nitrogen in the soil when you plow down Phillips 66 Ammonium Nitrate this fall. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

Sixth, you'll get more nitrogen in the soil when you plow down Phillips 66 Ammonium Nitrate this fall. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

Seventh, you'll get more nitrogen in the soil when you plow down Phillips 66 Ammonium Nitrate this fall. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

Eighth, you'll get more nitrogen in the soil when you plow down Phillips 66 Ammonium Nitrate this fall. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

Ninth, you'll get more nitrogen in the soil when you plow down Phillips 66 Ammonium Nitrate this fall. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

Tenth, you'll get more nitrogen in the soil when you plow down Phillips 66 Ammonium Nitrate this fall. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

Eleventh, you'll get more nitrogen in the soil when you plow down Phillips 66 Ammonium Nitrate this fall. The nitrogen will be in the soil when the young plants start growing. It will be there when the grain is harvested. It will be there when the grain is sold.

AUG. SEPT. OCT.

A companion high nitrogen fertilizer for your quality mixed goods.

PHILLIPS 66 FALL ADVERTISING WILL REACH 4,625,000 FARM READERS

Fall business is plus business—and Phillips 66 is out to help you get more of this end-of-the-year profit. Convincing ads like these demonstrate to your best prospects that they can profit by fall application of fertilizer.

Look for the message in these ads that sells balanced fertilization—and mixed fertilizers. Another Phillips 66 extra to make your selling job more profitable.

PHILLIPS CHEMICAL COMPANY

A Subsidiary of Phillips Petroleum Company, Bartlesville, Oklahoma

Offices in:

AMARILLO, TEX.—First Nat'l Bank Bldg.
ATLANTA, GA.—1428 West Peachtree Street
BARTLESVILLE, OKLA.—Adams Bldg.
CHICAGO, ILL.—7 South Dearborn St.
DENVER, COLO.—1375 Kearney Ave.
DES MOINES, IOWA.—6th Floor, Hubbell Bldg.

HOUSTON, TEX.—1020 E. Holcombe Blvd.
INDIANAPOLIS, IND.—1112 N. Pennsylvania St.
KANSAS CITY, MO.—500 West 39th St.
MINNEAPOLIS, MINN.—212 Sixth St. South
NEW YORK, N. Y.—80 Broadway
OMAHA, NEB.—6th Floor, WOW Building
PASADENA, CALIF.—330 Security Bldg.

RALEIGH, N. C.—804 St. Mary's St.
SALT LAKE CITY, UTAH—68 South Main
SPOKANE, WASH.—521 E. Sprague
ST. LOUIS, MO.—4251 Lindell Blvd.
TAMPA, FLA.—3737 Neptune St.
TULSA, OKLA.—1708 Ultee Square
WICHITA, KAN.—501 KFH Building

**We are telling
millions of farmers**

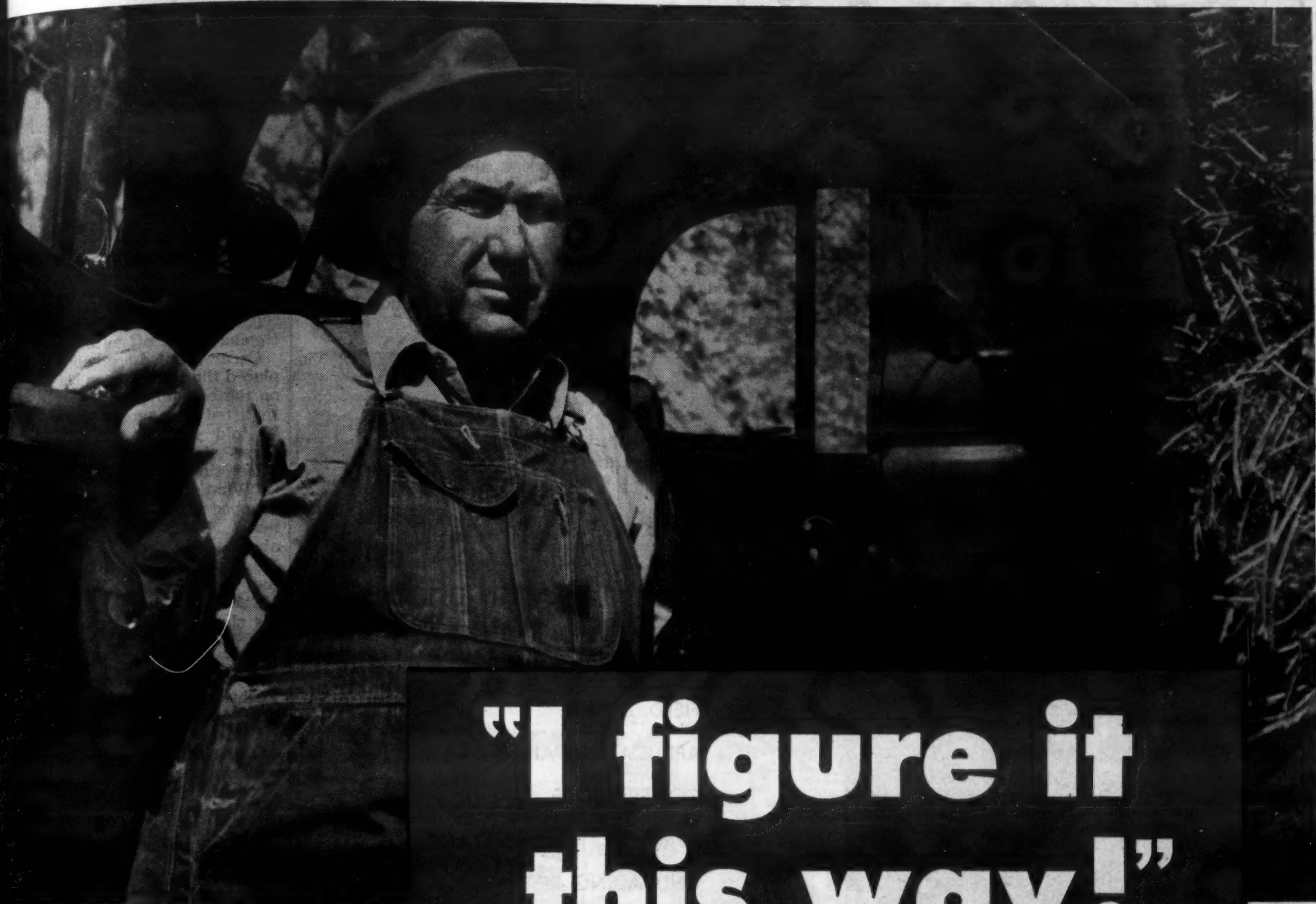
Fertilizer Grows Farm Profits

The advertisement on the opposite page is the sixth in a series in a powerful and continuing campaign directed to the attention of more than 3½ MILLION readers of farm magazines.

Nitrogen Division, Allied Chemical & Dye Corporation, is conducting this campaign to serve the best interests of the farmer, the fertilizer manufacturer, the county agent, the country banker, the experiment station, the extension service and all others interested in a profitable agriculture.

This campaign is designed to be helpful to you in your efforts to serve the farmer. We trust that it meets with your approval and we greatly appreciate any comments or suggestions you may wish to send us.

NOTE: The advertisement shown is for Southern states. If you wish to see the text for other states, write for it and it will be mailed to you promptly.



**"I figure it
this way!"**

See Your County Agent

Ask your County Agent to recommend the analyses and amounts of fertilizers best suited for your crops and soils. His advice to you is based on the latest official recommendations from your Extension Service and Experiment Station.



See Your Banker

Bankers are alert to good investments. They know that fertilizer is low in cost as compared to other things the farmer buys and pays a big return in bigger yields of better quality crops. If you need money to buy more fertilizer, talk it over with your banker.



See Your Dealer

Your fertilizer dealer can supply you with a good brand of fertilizer in the amounts and analyses recommended by your County Agent. Help your dealer to get your fertilizer on time by placing your order early and accepting prompt delivery. Remember, fertilizer grows farm profits. Make sure you get enough this fall!



"When low crop prices put you through the wringer, it's no time to let up on good farming. The best way to make money is to keep your costs down. That's why I'm using more fertilizer than ever before. The extra yields I get from extra fertilizer are the lowest cost yields I produce.

"Because of the soil bank, I'm seeding fewer acres to small grains this fall. But I'll make more money on less land with less seed and labor, by using more fertilizer. A heavy application of fertilizer will give me the growth I want for some winter grazing plus a good start towards a profitable yield of grain next summer. Of course, I'll top-dress with more fertilizer after I take my cattle off.

"I'm fertilizing all my pastures right now to grow more good green feed at low cost and let my cattle do the harvesting. I save on labor and save on feed bills and get extra gallons of high-quality milk and extra pounds of top-grade meat that pay me a big profit over the cost of the fertilizer. My farm program is **plenty of fertilizer!** I figure it's the best help I can get to keep my costs down and my profits up!"

Fertilizer grows farm profits. Fertilizer gives you more crops for your money and labor on every acre you plant to cash crops, feed crops and cover crops. Fertilizer cuts costs per bushel or ton of crop yield. Use more fertilizer to open up your margin of profit between costs and sales prices and you'll never be a marginal farmer!

The fertilizer industry serves the farmer. Nitrogen Division serves the fertilizer industry as America's leading supplier of nitrogen for use in mixed fertilizers.

NITROGEN DIVISION Allied Chemical & Dye Corporation
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Fertilizer Grows Farm Profits

Better Selling

Richer Sales Fields for Dealers



Doing Business With

Oscar & Pat



By AL P. NELSON
Crolife Special Writer

It was Friday night, and all the stores in town were open until nine o'clock. Pat McGillicuddy and his partner, rotund, balding Oscar Schoenfeld, took turns managing the store on Friday evenings, so that each partner would have an opportunity to shop with his wife every alternate week.

Oscar and Minnie parked their 1946 Chevie in front of the Martin Shoe Repair Shop, and Oscar turned to Minnie before she got out of the automobile. "Now, Minnie," he warned, "you go into the Red and White, Hambro's and the Great Plains store and price all those grocery and meat items. Then you come back and tell me. I'm going to take in a pair of shoes for repair and then

I'll go to the Red and White to meet you."

"Oh, do you always have to tell me to be careful, Oscar?" Minnie said plaintively. "You know I always take good care of our money and look for bargains."

"Not last week you didn't," Oscar said. "You bought calf's liver instead of beef and that was 30¢ more."

"All right, all right," Minnie

agreed. "I will watch prices more careful. But don't scold me, Oscar."

"Huh," said Oscar, "I would not want you to get into a spending class like that fellow McGillicuddy. He thinks every second sack of fertilizer is filled with gold just for us."

Minnie got out of the car and began to walk the two blocks to the spot where most of the grocery stores were located. Oscar always parked at the same general area — just outside the metered zones. He had been doing this for years and he often smiled at the nickels and pennies he saved.

Now he took a pair of worn oxfords into the shoe shop, where he tired looking Ned Martin, the shoe repair man, was bending over a last, ripping a sole off an old shoe.

Oscar grunted a greeting and then placed the pair of worn black oxfords on the counter. Frowning, Mr. Martin lifted them up and inspected them. "I told you last time, Oscar, these ain't worth repairing again. Three times and out."

"What's the matter?" Oscar snapped. "Don't you want my business? Dr. Fechsinger and I talked about shoes at the Lutheran picnic. He says he has his shoes repaired four to five times."

"Yeah, but he pays \$24 a pair for his shoes," Mr. Martin said. "They are made of wonderful leather and they hold shape. Shoes like that will last seven to eight years. And Dr. Fechsinger has four pairs like that — all \$24 a pair."

"He has!" Oscar was shocked by the investment in four pairs of shoes at one time. He had thought Dr. Fechsinger a true friend, one who devoted to the art and pleasure of saving. But now—

"Well," he said, "I paid \$5.98 for these shoes at a sale. The clerk said they were marked down from \$17.50."

Ned Martin smiled unbelievingly. "I don't know about that, Oscar, but you would be throwing your money away on these shoes to have them resoled again. I won't do it. I have my reputation to consider. I don't want to turn out poor work, and I would be poor work on such, such old shoes. There is no base to work on."

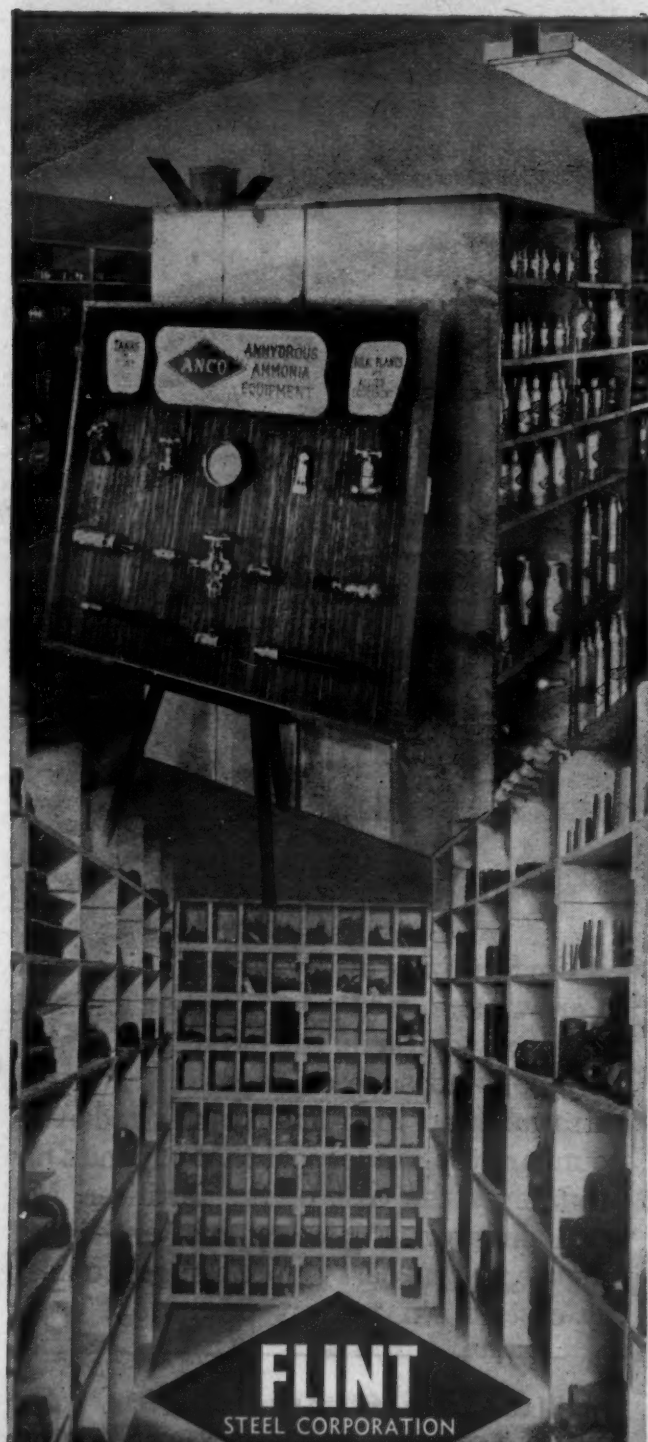
Oscar's lips tightened and his thick fingers grasped his shoes. "You talk pretty high-toned, Mr. Martin," he snapped. "That is why you get nothing. You let your wife and kids buy, buy, buy, and you charge me for it. You — you don't even own your own house. If you would do the work that's brought to you, I would give you money to pay your bills."

Ned Martin's face went white. "I run my own business in my own way and it's my business how I live. I've done good work for you and your wife for many years."

"You bet we have brought a lot of work here," Oscar said sharply. "I have been telling farmers all these years to come here with their shoes. 'I appreciate that,' replied Mr. Martin. 'But please don't recommend any more. They come here with the worst, old broken down shoes and want me to repair them. They say you told them a man who saves money by having shoes repaired four or five times. I have to turn half those farmers down, and then they get mad at me.'"

"You see," Oscar said triumphantly. "You are running your business wrong. You turn away customers. 'For their own good,' Mr. Martin said. 'I can't let them spend money on shoes that ain't worth it. You—you don't sell customers fertilizer or farm chemicals, do you?'"

Oscar straightened proudly.



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STEEL CORPORATION

ANCO

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Anco is the Largest Stocking
Distributor in the U. S. of
CORKEN Equipment.
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Complete WAREHOUSE STOCKS as near as your phone

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- FIELD TANKS
- APPLICATOR TANKS
- COMPRESSORS
- PUMPS
- UNLOADING RISERS
- LOADING RISERS
- ROTARY & MAGNETRON GAUGES
- ALL TYPES OF VALVES AND FITTINGS FOR STORAGE TANKS (Including extra-heavy fittings)
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- FLINT TANKS

Our engineers are available to assist you in planning or installing bulk plant equipment.

TWO GREAT NAMES IN NH₃ EQUIPMENT

ANCO Manufacturing & Supply Co.

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Des Moines, Ia. — 325 Exchange Bldg. — 4-5347

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course we don't. But that partner mine — Pat McGillicuddy — is ways staging cat and dachshund les, on stuff he says sleeps on the elves. He cuts the price in half more and farmers come and buy. e don't tell them not to buy."

"Well, that is different," Mr. Martin pointed out. "In that case the goods do not deteriorate with age. Maybe the package label is just a little faded. But with shoes such as yours, the leather now is just—just rotten, that's what!"

Oscar's lips tightened once more. You will be sorry, Mr. Martin. You will be sorry. Ach, I will take these shoes to a shoe maker in another town, and if he fixes them, I will be that he gets a lot more business from honest people who want to save money instead of throwing it away, like some others I know."

And out the door he marched. He put the shoes on the floor of the car, unlocked the door and then went down the Red and White store. He was in the mood to look at her shopping basket — undoubtedly full of things she wanted to buy, and then "Uh huh! Uh, huh!" and proceed to put back about 70% of the items on the shelves.

This business of saving. It was so important, and yet some people could not see it. Dumbkopfs.

WHAT'S NEW
(Continued from page 11)

s shocked eations and specific uses are conined in the booklet which may be ad if you check No. 6465 on the nd, one al coupon and mail it to Croplife. pleasure

No. 6463—Treatment for Burns

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d triumpha your busin customers "Mr. Mar spend rep in't worth customers p cals, do you proudly.

A product called by the trade name, G-63 burn relief spray, is being produced by the General Scientific Equipment Co. It comes in a push-button spray bomb and the product is claimed to treat burns and protect the skin with a cooling emollient film. Secure more complete details by checking No. 6463 on the coupon and mailing it to this publication.

No. 6466—Bagging Cost Kit

A new "do-it-yourself" packaging work kit, designed to help fertilizer manufacturers figure bagging costs, is available at no charge from Union Bag-Camp Paper Corp. The kit contains tables for determining the labor costs per ton of material and per thousand bags at varying production rates. Also enclosed is a chart which figures the cost of multiwall bag closing materials (cotton thread, rayon thread and filter cord) as well as a bag cost comparison sheet. Secure the kit by checking No. 6466 on the coupon and mailing it to Croplife.

Alabama Soils Test High in Acid

AUBURN, ALA. — A summary of nearly 20,000 soil samples analyzed by the Alabama Polytechnic Institute since February, 1953, shows that the majority of soil is moderately to strongly acid, Dr. C. M. Wilson, soil chemist at the Alabama Experiment Station, has reported.

He said that Alabama farmers are applying about 150,000 tons of lime annually whereas they should be using about 1,000,000 tons.

Dr. Wilson said that data indicates need for fertilizer having an even ratio of phosphate to potash in most areas in the state.

Drive to Assist 4-H Club Work Started in Industry

LOUISVILLE—The fertilizer industry again this year will be given an opportunity to lend its support to 4-H Club work on a nationwide basis, according to John V. Collis, president of the Federal Chemical Co., Louisville.

Mr. Collis, who is a member of the 4-H Builders' Council of the National 4-H Club Foundation, has announced plans for a program to raise funds within the fertilizer industry in behalf of the work of the National 4-H Club Foundation. The drive, which got under way Sept. 7, is one of several being carried on by the 4-H Builders' Council in various areas of agriculture and industry.

The National 4-H Club Foundation—an educational, non-profit organization—has as its current activities: (1) the International Farm Youth Exchange, under which nearly 1,600 rural youth have been exchanged between the United States and 50 countries throughout the world; (2) the establishment and operation of the National 4-H Club Center in Chevy Chase, Md.; (3) a citizenship improvement study, being carried on in five pilot states to explore ways of increasing the present contribution of 4-H Club work in the development of good citizens, and (4) human relations training for youth leaders, a workshop program to assist youth leaders in working more effectively with youth.

Mr. Collis is a director of the National Plant Food Institute.

Better Selling
Richer Sales Fields for Dealers

Nutrone New Name for Smith-Rowland Product

NORFOLK—The Smith-Rowland Co. has announced that its product formerly known as Smirow tankage has a new name of Nutrone. Russell Spivey, Smith-Rowland manager, said that "nutro" is derived from nutrition and "nite" is symbolic of the nitrogen the product contains.

BUYS FEED STORE

LITTLE FALLS, MINN.—William Archer, Akeley, has purchased the Noffsinger Feed Store here. The store will be called Archer's Feed & Supply. Mr. Archer, who operates a feed and hardware store at Akeley, plans to enlarge the former Noffsinger store.

SALESMEN... to help boost YOUR profits!



**LION Advertisements
Sell LION Nitrogen, and
Your Mixed Goods, Too!**

Continuous Lion advertising appears in leading farm publications, month-after-month, to pre-sell the Lion brand to farmers—and to sell the value of your mixed fertilizers as well!

Current advertisements are appearing in Farm and Ranch-Southern Agriculturist, Progressive Farmer, The Farmer, Nebraska Farmer, Kansas Farmer, Prairie Farmer, Wallace's Farmer & Iowa Homestead, Wisconsin Agriculturist and Farmer, Missouri Ruralist and Missouri Farmer. All of these advertisements are in color.

Each Lion advertisement promotes the economic benefits of properly using fertilizers, including Lion Ammonium Nitrate, to help increase the farmer's profits. Each advertisement sells hard on the importance of soil tests in the intelligent use of all commercial fertilizers. Lion, a leader in nitrogen production, leads the way to good fertilization practices... to better profits for you!

LION'S QUALITY LINE OF NITROGEN FERTILIZER MATERIALS

- LION ANHYDROUS AMMONIA—82.2% nitrogen. Quality guaranteed.
- LION AQUA AMMONIA—Ammonia content above 30%—other grades to suit your requirements.
- LION AMMONIUM NITRATE FERTILIZER—Improved spherical pellets. Guaranteed 33.5% nitrogen.
- LION NITROGEN FERTILIZER SOLUTIONS—Various types to suit your particular manufacturing needs.
- LION SULPHATE OF AMMONIA—White, uniform, free-flowing crystals. Guaranteed 21% nitrogen.



LION OIL COMPANY

A DIVISION OF MONSANTO
CHEMICAL COMPANY

EL DORADO, ARKANSAS

DISTRICT SALES OFFICES: Lion Oil Building, El Dorado, Ark. • Insurance Exchange Building, Des Moines, Ia.
National Bank of Commerce Building, New Orleans, La. • 1401 Building, Atlanta, Ga.

Large Diversified Stocks Make Louisiana Retail Store A 'One Stop' Supply Center

By AL P. NELSON
Croplife Special Writer

When it comes to a diversified stock of farm supplies, items which bring in a good volume of business the year around, Alexandria (La.) Seed Co. is an excellent example of a firm which cashes in on its sales opportunities.

In addition to selling fertilizer, feeds, seeds and garden supplies, the company also has vegetable plants, pottery items, pet supplies, goldfish and insecticides. In fact, just about anything which is used by the farmer and gardener to produce crops can be obtained here, and the company finds that a large stock really builds store traffic.

Charles Smith, who manages the large farm supplies store, says that farmers like to buy on a "one stop" basis, just as other people do. In other words, if the farmer knows he can fulfill most of his farm needs at a reliable store he'll form the habit of going there to buy first.

This store is a Purina dealer, and as such has seven active routes which are covered during a five day week. While the men who cover such routes place most of their emphasis on selling feed, they do seasonally push such items as fertilizer, insecticides and other products. This emphasis on outside selling funnels a lot of this business to the firm on such allied supplies. It results, too, in many fertilizer orders being placed in advance.

The interior of this large store is one of the best laid out merchandising establishments that this writer has ever seen in the farm supplies field. Quite a few counters, low platforms and islands are used for showing merchandise, and most of these display units were built to the specifications of the management.

Very impressive indeed is a 25 ft. long counter which fronts the seed department. A network of drawers in cabinets against the wall contains various amounts of bulk garden seeds. These are all properly labeled on the front of the drawers, so that customers can see them. The big, low serving counter has two scales which make the weighing of seed and serving of customers much easier, especially on rush days. During the

long spring planting season, states Mr. Smith, it is not unusual to find 25 or more customers lined up waiting for service.

Many customers, he said, also buy fertilizer at the time they purchase seeds. Some buy insecticides at time of seed purchase, too.

"We are proud of our large seed department," states Mr. Smith, "and we know it is one of our best traffic builders. Farmers and gardeners alike usually come here first for seed needs."

The amount of tomato and other vegetable plants which this store displays during the spring is like that of a greenhouse. Many dozens of plants are moved in one day, along with seeds and fertilizers in season.

During the past few years, too, the firm has gone into the selling of potted plants and flowers. Women customers have shown great interest in the line, and it will be expanded, states Mr. Smith. The store has a large stock of flower pots, too, for gardening and farm use, and these sell very well, as does peat moss and similar supplies. Mr. Smith believes that farm supply and other stores are just beginning to tap the market for potted plants of all kinds. This is a business, he reports, which shows promise of development in fall and winter, too.

"We sell many cases of insecticides," says this store manager. "Hardly a month of the year goes by but what we have insecticides on display. Beginning in February, we usually expand the display space for the line, and sprayers, too, are shown in considerable quantity. We notice a big increase in demand on insecticides as the public becomes more familiar with what they can do in controlling lawn and garden pests."

To give mass display effect, Mr. Smith often has floor level showings of insecticides, stacking case after case to give height and the idea of large stocks.

A special step up display fixture is used to show pet supplies. This fixture is built of one inch thick lumber, has 12 inch deep shelves and holds much merchandise. The turnover on such items is very high, reports Mr. Smith.

Aquariums and goldfish are other items which the customers can buy at this big store most months of the

year. These are items which sell especially well at Christmas, too.

This is one retail firm which believes in Christmas displays and atmosphere. Each year the firm has a beautiful Christmas tree on display, and this encourages people to shop longer at the store during the holiday season.

Rounding out the farm supplies lines, the store carries several islands of dairy supplies, farm hardware, poultry equipment and livestock and poultry remedies. Due to the large number of people who circulate around the large store, all islands get considerable attention and many impulse sales are made. Mr. Smith has 12 employees on his staff and all of them have instructions to keep tables, islands and stock in neat condition at all times so as to make the most of store traffic.

Fertilizers and insecticides get considerable attention in the firm's advertising program, reports Mr. Smith. The company uses newspaper and direct mail advertising, as well as radio and some television advertising. This wide array of mediums helps the firm to cover most parts of its large trade area regularly.

The high school agricultural classes and the county agent and extension services are doing so much educational work on fertilizers and insecticides that Mr. Smith says his company does not think it necessary to hold meetings on these subjects with farmers. However, the store does train its staff on feed and fertilizer products selling, so that employees are able to answer most questions of customers when they inquire about new products in these lines.

The Alexandria Seed Co. was organized in 1932. Its officers besides the manager, Mr. Smith, are: J. H. Cade, president; John Cade, Jr., vice president, and R. E. Crotty, secretary-treasurer.

Nearly 50,000 Soil Samples Tested at VPI

BLACKSBURG, VA.—Sampling of Virginia soils continues to be big business at Virginia Polytechnic Institute laboratories.

W. W. Lewis, agronomist at VPI, says Virginia farmers sent 31,142 samples for regular testing, and 17,964 samples for testing under ASC regulations, during the July 1955-July 1956 period. Regular testing charts lime, organic matter, calcium, magnesium, phosphoric acid and potash needs. Testing under ASC, which is done in cooperation with the state ASC committee, concerns only lime and pH, and is necessary for certain ASC payments.

Total samples tested amounted to 49,106, only a slight drop from the preceding year, when 49,340 samples were tested.

Several counties topped the 1,000 mark in samples sent in. Leading the list, counting both regular and ASC samples, were: Frederick, 1,754; Southampton, 1,354; Pittsylvania, 1,855; Nansemond, 1,145, and Augusta, 1,414.

CONTROL PROGRAM FAILS

PORTLAND, ORE.—Disappointed ranchers in the Long Creek-Ritter areas of Grant County had to put up with grasshoppers this summer due to faulty procedure in setting up the grasshopper control district on some 70,000 acres of land. The district was formed incorrectly, the county court said, and so declined to take money from the emergency fund to pay for spraying. A meeting in Long Creek near Prairie City, was attended by 23 ranchers to try to raise funds, but shortage of time and absentee ownership made it impossible.

OVER THE COUNTER

(Continued from page 9)

readily you will acquire selling skill. Treat customers as you would be treated yourself. The moment a customer enters the store he should receive attention; other storekeeping chores can wait. Be dignified and courteous.

"It's work. No job worthwhile is devoid of the work element, much as we all would like to take it easy. Modern day competition, low mark-ups, and very high taxes provide no margin for relaxing or thumb-twiddling. There is always something to do to make the store attractive to customers.

"Get acquainted with stock. We sell hundreds of items and it is the duty of everyone of us to know everything about each item. Spend every spare moment in studying them; read manufacturers' literature describing their products; study the trade journals we receive, and by all means ask questions of the older people in the store. They want to help you. The quicker you become a profitable employee, the surer they will be of their jobs.

"Be an expert at the extra things. There are a lot of steps involved in making a sale other than taking the customer's money. Learn all about them and how to do them properly. Remember that it is just as important to convince the customer he made a good purchase as it is to sell him in the first place; that keeps the customer happy and contented.

"Our competitors are just as aggressive for business as we are. We have to convince customers that we have better merchandise and more service, or we cannot secure the business. Never under-rate any of our competitors; never discuss them with customers either.

"Guarantees mean something. Every customer likes to be sure of whatever he is buying. Read and study the individual guarantee on any warranted piece of merchandise. Know just where the store stands. Assure the customer of everything to which he is entitled; nothing more.

"Do it yourself. When you spot something in the store that needs attention don't wait for someone else to take care of it; do it yourself then and there.

"You'll earn your own pay raised. The more you sell the happier we will be to increase the size of your paycheck. We work on a basis of each employee meriting his own salary increases; time of service has nothing to do with it.

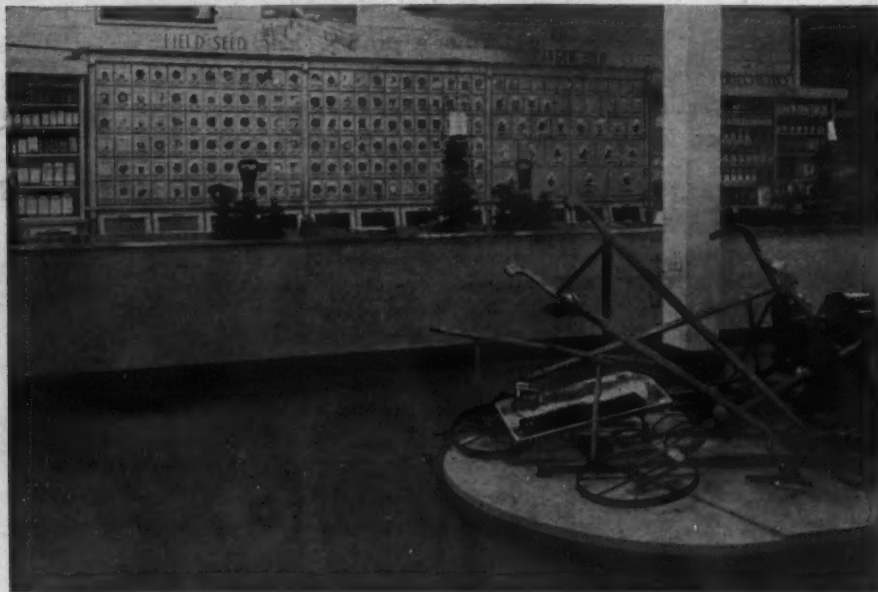
"Get acquainted with our customers. All of us like to trade in the stores where we are known and recognized. Work toward the day when people will be coming in asking for you by name; then your sales figure will go up and so will your earnings. Extra minutes spent in getting better acquainted with each customer you serve will pay off handsomely, both for yourself and the store.

"Sell outside the store. We don't expect you to work for us in your spare time. But if the opportunity comes along to say something good about the store, or recommend merchandise we have, don't avoid it. Just a word here or there can make extra sales for you next day.

"We are proud to have you on our staff; we hope you are proud to be with us."

Guide for Others

Unfortunately, the source for the "basic information sheet" is unknown and we are unable to give credit to its author. However, we feel certain that whoever devised it will not object to having the idea put into practice by other farm supply stores.



MODEL STORE INTERIOR—Above is a picture of the interior of the Alexandria (La.) Seed Co., illustrating the store's neat manner of displaying merchandise. In the background is a 25 foot long counter which fronts the seed department.

Scientific Farming Methods Enable Texas Community to Grow High Cotton Yields

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TARZAN, TEXAS—Once again this community last year came up as one of the highest per-acre producers of cotton in Texas. In a strip of land lying a few miles west of the average was near the two-thirds mark, the average was near the two-thirds mark. This is known as the White Flats because the land is white underneath, being a bare eighteen inches of soil. No irrigation water was found, and the whole area was worthless as far as farming was concerned. Now it sells for several hundred dollars an acre and produces more cotton than any single community in West Texas.

The road to high cotton yields was paved years ago by a man named Roscoe Hayden who had an idea but very little in the way of means to promote it. He started dabbling with irrigation farming on a shoestring, and in so doing, developed an idea for making plants produce which was adopted and improved upon by others. Mr. Hayden believed that with water available, the soil could be fed with food so that it would double its present yields.

Mr. Hayden figured he was fortunate to make three quarters of a bale per acre at first, but he started applying fertilizer and using more water. Also he hated the sight of a cotton insect and began spreading more poison than anyone in the area had ever used before. He did make some mistakes, but found his own cotton yields climbing to a bale per acre, then a bale and a half, and finally two bales.

Other growers, observing the results gained by Mr. Hayden, began to follow his lead. They started purchasing fertilizers and insecticides in quantities, and both entomologists and agronomists were sent out by interested companies to make recommendations. This put the possibility of error at a minimum, and both fertilizers and insecticides were bought with the assurance that the correct materials were being used.

When the farmers began to realize large improvements in both yields and profits, they began to apply more fertilizer, greater amounts of insecticides, and put better tillage methods into use.

Last year the growing expense was high, but the net profit was enough to make farmers from other areas envious. Homer Howard picked 600 bales from 280 acres. A neighbor, Roy Pierce, gathered almost three bales per acre on a field basis. Other farmers in the area, such as Woody Smith, Noel Glendening and William Smith have crops six-feet tall and loaded with cotton bolls from top to bottom. Any one of them would be disappointed at a mere two bales per acre, because they have their sights set on three, and then maybe in another few years, it might be four bales per acre.

"It's a big expense," said Coy Welch of the association, "because some of the men spend from \$100 to \$125 an acre to make a crop. Yet two and a half bales per acre will gross around \$600 where they grow the long staple variety. So even allowing for harvest, hauling and several other things, some of them will have a net profit of several hundred dollars an acre."

Mr. Hayden who started the trend toward scientific crop production made enough money to buy a ranch, and he moved to it several years ago. Today he would be surprised to find farmers using 500 to 600 lb. of dry fertilizer and 100 lb. of liquid nitrogen on an acre of cotton. Or seeing the airplanes fly over one field from ten to twenty times during a season dropping insecticides on the plants. Also the new practice of defoliation is something he never knew during his tenure as a farmer.

Yet in this area it is Roscoe Hayden who gets the credit for the record-breaking yields being produced at

Tarzan. He was the first one to hit upon a plan that has made a strip of worthless land the best cotton-producing area in West Texas. He never made over two bales per acre in his life, but he got the neighbors started. Where they will stop no one knows. Already several of them are wondering if the soil can be made to produce four bales per acre.

It is a safe guess that if anyone does it, the farmers in the Tarzan community won't be far behind.

NEW BULLETIN

EAST LANSING, MICH. — Michigan State University is offering farmers and other interested persons a new bulletin on "Insect and Disease Control on Vegetables and Truck Crops."

Tobacco Growers in Massachusetts Join Soil Bank Program

BOSTON — Tobacco growers in Massachusetts are the only New England farmers eligible for participation in the government's soil bank plan whereby farmers are paid for not raising price supported crops.

The value of the Massachusetts tobacco crop is estimated at \$5,000,000 and the crop is grown on approximately 5,000 acres in the Connecticut Valley.

This year, a widespread infection of blue mold hit tobacco fields in Hampden, Hampshire and Franklin counties. The blue mold has convinced hundreds of Connecticut Valley farmers that the soil bank program was a good idea after all.

Hundreds of acres of infested fields have been plowed under during recent weeks by farmers who originally intended to take their chances with

CROPLIFE, September 10, 1956—17

another year on growing a tobacco crop.

Now, they are numbered among the more than 700 Massachusetts farmers who are sharing nearly \$800,000 for not growing tobacco. The government's soil bank program is bailing out the farmers from what would normally have been a major agricultural disaster.

Bigger Potato Yields

MADISON, WIS.—Improved foundation and certified seed, along with better varieties, fertilizers, fungicides, insecticides and irrigation, have boosted Wisconsin's average potato yield by about 135 bu. per acre since 1935. Average yield between 1935 and 1940 was about 80 bu., says H. M. Darling, head of the Foundation Seed Potato Project, located at the University of Wisconsin. Between 1942 and 1952, the average yield increased to 146 bu. per acre. Since then, Wisconsin potato fields have given an average yield of 215 bu. per acre.

IN
PEACHES,
POTASH-ENRICHED
FERTILIZERS
MAKE
THE
DIFFERENCE



with sufficient potash



without sufficient potash

It makes quite a difference in size and yield—and in the farmer's profit, too—when the basic nutritive elements in a soil are replenished with balanced fertilizers. Potash, a necessary ingredient of these balanced fertilizers, builds up the resistance of crops to diseases, while increasing both quality and yield.

USP's high-grade muriate of potash has the highest K_2O content and is free-flowing and non-caking—important advantages in the manufacture of these modern fertilizers which help American farmers to better crops and better incomes.

UNITED STATES POTASH COMPANY

DIVISION OF UNITED STATES BORAX & CHEMICAL CORPORATION
30 Rockefeller Plaza, New York 20, N. Y.
Southern Sales Office
Rhodes-Haverty Building, Atlanta, Georgia



HIGRADE MURIATE OF
POTASH 62/63% K_2O
GRANULAR MURIATE OF
POTASH 60% K_2O MIN.

REG. U. S. PAT. OFF.



Dr. Leo Orth

Sinclair Announces Nitrogen Products Division Appointments

NEW YORK—Sinclair Chemicals, Inc. has announced the appointment of Dr. Leo E. Orth as agronomist in its nitrogen products division headquarters in Chicago and of Maurice E. Peterson as sales representative with headquarters in Blencoe, Iowa.

The division will handle marketing of anhydrous ammonia and nitrogen solutions from the new manufacturing plant located at Hammond, Ind. Dr. Orth graduated from North Dakota State Agricultural College with a bachelor's degree in general agriculture in 1942. He was commissioned a second lieutenant, infantry and served as battalion communications officer in the European theatre of operations.

He later was economics officer, food and agricultural section of the American Military Government for Germany and was discharged as first lieutenant. In 1951, he received the degree of Ph.D. in soils from the University of Wisconsin and on graduation entered Minnesota Farm Bureau Service Co. in St. Paul as agronomist. In 1952, he was appointed director of research and agronomist, which position he resigned to join Sinclair Chemicals, Inc.

Mr. Peterson will handle sales of Sinclair's anhydrous ammonia and



Maurice E. Peterson

nitrogen solutions from the Hammond plant in Iowa, Minnesota and certain areas in other neighboring states.

A native of Ottumwa, Iowa, Mr. Peterson graduated in 1943 from Iowa State with a bachelor's degree in animal husbandry and was a member of Gamma Sigma Delta, honorary agricultural fraternity. He was then commissioned in the army and served with the 101st Airborne Division in field artillery parachute unit in the European Theater of Operations, and was discharged in 1947 with the rank of captain.

Mr. Peterson established a farm near Onawa, Iowa in 1947 and in 1954 became partnership-owner of S-P-S Plant Food Co., Onawa, Iowa.

Water Conference Planned at Texas A&M

COLLEGE STATION, TEXAS—Aspects of rainmaking will be discussed by a representative of the U.S. Weather Bureau during the second Water for Texas Conference to be held at Texas A&M College Sept. 17-19.

The conference is sponsored by the Water Research and Information Center of the Texas A&M College System.

Other parts of the program include watershed development and management, water laws of the state, needs and uses of water in production of oil and water for Texas agriculture and forestry. Panel discussions during the three-day meeting will deal with better uses of water for engineering works and agricultural irrigation, as well as a statewide plan for water use and methods of financing a statewide program.

John Calhoun, dean of the A&M School of Engineering, and R. D. Lewis, director of the Texas Agricultural Experiment Station are co-chairmen of the conference. Paul Weaver, professor of geology, is program chairman.

TURFGRASS CONFERENCE

COLLEGE STATION, N.M.—The second annual New Mexico Turfgrass Conference will be held in Milton Hall on the campus of New Mexico A&M College, Oct. 4-5, Fred A. Day, president, has announced.

Gloomicides

A foreman had tried every strategy in the book, in a fruitless effort to spur a particularly lazy laborer to do an honest day's work. Finally he turned, in desperation, to the patriotic approach.

"You should be ashamed of yourself," he said, approaching the man who was in his usual state of lethargy. "Civilization is on the brink of disaster. Everyone is supposed to do his share to ease the world crisis, and here you are loafing."

"Oh," said the lazy one, "I'm not loafing. I am just doing my share to relieve world tension."

★

Blessed are the hard of hearing for they miss much small talk.

★

A beautiful Frenchwoman died suddenly leaving as her principal mourners a husband and an ardent admirer. At the funeral the husband made an appropriate showing of grief, but the admirer was inconsolable. He sobbed, beat his breast, and rolled on the ground. Finally, the husband put his arm around the poor fellow's shoulder and soothingly said, "Don't take it so hard, my friend. I shall marry again."

★

A young girl traveling in Europe found herself in Germany, unable to speak the language and feeling rather lost and unhappy. As she crossed a street she sneezed, and the policeman on duty at the corner said, "Gesundheit!"

The girl turned, threw her arms about his neck and said happily, "Oh, you can speak English!"

★

Three men who died were cremated. One was from Nebraska, one from Ohio and one was from Kansas. The Nebraska man was cremated first, and when his ashes were removed they were put into a quart jar. The Ohio man was next and his ashes were put into a pint jar.

The Kansas man was last. At the end of 15 hours, the furnace door was opened. Out walked the Kansas man, mopping his face with his kerchief and saying, "Boy, if we get two more days of this hot weather, it'll ruin the wheat for sure."

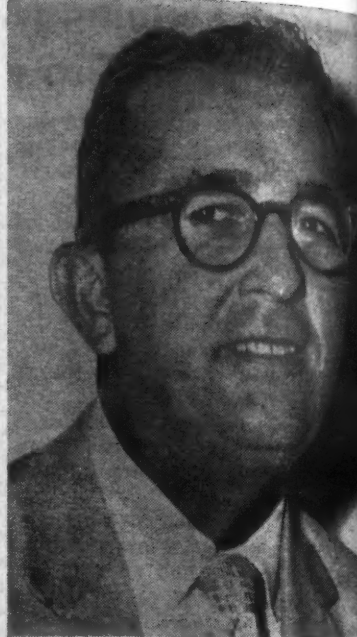
★

And now here's a simple suggestion to all you golfers who'd like to cut off four to eight strokes from your score—leave out one hole.

★

It was near the end of the day and the first aid instructor had answered hundreds of tiresome questions. "If I should come home," said a fluttery little woman, "and find my husband with his head in the oven, and the gas turned on, what should I do?"

As he picked up his kit and reached for his hat, the instructor replied, "Baste him every 10 minutes."



Clarence E. Hooks, Jr.

SAFETY SPEAKER—Describing how the state of Florida cooperates rather than regulates its state departments, Clarence E. Hooks, Jr., principal safety representative of the Florida Industrial Commission, will appear on the program of the fertilizer section of the National Safety Council in its Oct. 22-23 meeting in Chicago. Mr. Hooks was educated in Florida schools, served in the army's medical department during World War II, and for the past eight years, has been with the Florida Department of Industrial Safety. The safety sessions will be held at the LaSalle Hotel in Chicago.

Crown Zellerbach Plans New Bag Plants

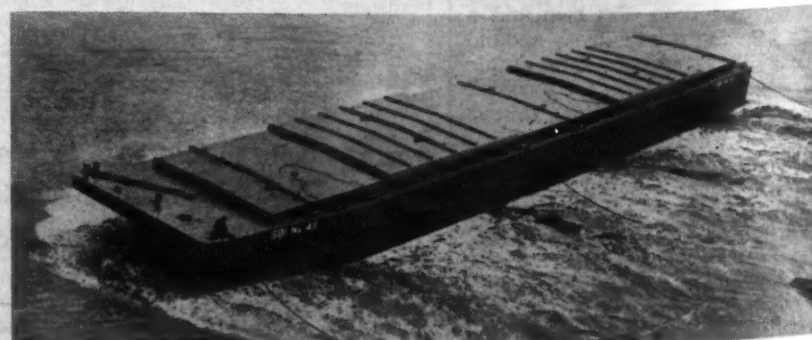
SAN FRANCISCO—A new factory to produce bags in which fertilizer and other agricultural chemicals can be packaged and shipped will be dedicated in Antioch, California, this fall, and a second will be under construction next year at Bogalusa, Louisiana.

The Crown Zellerbach Corp. of San Francisco, manufacturer of mulch wall bags, is completing a two and half million dollar structure in Antioch, and the Bogalusa plant will be built at an investment estimated four million dollars. This factory will measure 350 feet by 600 feet.

A. W. Weaver, Fertilizer Firm Founder, Dies

NORFOLK, VA.—Anderson Weaver, 76, founder and chairman of the board of the Weaver Fertilizer Co. at nearby South Money Point died Aug. 24.

Mr. Weaver came to Norfolk from Rice, Prince Edward County, late 1905 and went with the Armco Fertilizer Works. He subsequently became district manager but resigned in 1929 to establish his own business.



OLIN MATHIESON BARGE—The first of six new covered hopper barges for use by Olin Mathieson Chemical Corp. is shown as it slides into the Ohio River. The 195-foot barge was constructed by Dravo Corp. at its shipyard on Neville Island near Pittsburgh. The barges are of all-welded steel construction 35 feet wide and 11 feet deep with a load capacity of 1,400 tons. Dravo patented steel rolling hatch covers make them weather-tight. The covers can be moved to expose 50% of the hold for loading and unloading. The six barges will be used to carry chemical fertilizers, soda ash and other bulk commodities. The transportation department in Baltimore is responsible for the barge operation.

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Poison Ivy Control Program Under way at Valley Forge Park

PHILADELPHIA—Pennsylvania is waging war on a record crop of poison ivy that has invaded more than a third of Valley Forge Park. The action anticipates next year's national Boy Scout jamboree when some 50,000 scouts will camp in the park for a week during July. The time that the national jamboree is staged at Valley Forge Park, in 1950, many scouts contracted poison ivy, some severely enough to be hospitalized.

Using a newly developed chemical weed killer, a force of sprayers in mobile units and on foot is waging the battle under command of Maurice K. Goddard, secretary of the Pennsylvania Department of Forests and Waters.

The spray is killing off the ivy at a rapid rate, Mr. Goddard says, without harming the park's display of 65,000 dogwood trees or any of its other beautiful plantings, although the ivy was entwined in dogwood, Virginia creeper, honeysuckle, maple, oak and hickory trees, berry bushes, and some 20 other varieties of trees and shrubs.

In tests at the Ambler, Pa., experimental weed farm of the American Chemical Paint Co., the chemical, Weedazol, has given a 100% kill on poison ivy, Robert H. Beatty, the firm's agricultural research director, said, and should remove virtually every trace of poison ivy in Valley Forge Park without injuring any landscaping or wildlife browse.

The spraying is the most comprehensive single job ever undertaken to get rid of poison ivy, according to Ralph Kauffman, vice president of the Asplundh Tree Expert Co., Jenkintown, Pa., which does chemical weed and brush clearing jobs throughout the country. The men in the spraying crews built up an immunization by taking a poison ivy preventive medicine daily for a week before the job began and continue to drink the preventive in their breakfast orange juice.

This summer's heavy rainfall and damp weather have pushed the poison ivy growth more than ever. The infestation has created no special problem for the average picnic party, nor among the millions of other visitors who come to the national shrine from all over the world—more than 2,750,000 have made the pilgrimage in a single year.

Unlike the usual pilgrim, however, the scouts cover every inch of the site in their explorations, officials pointed out. Mr. Goddard expects the spraying to clear the noxious weed from the park shortly after the job is finished. It will take several weeks to run down every last poison ivy patch. Touch-up sprays are in line for subsequent seasons.

Areas totaling about 700 acres of the Park's 2,030 acreage are infested with poison ivy, according to a survey made by W. P. Moll, chief of the Pennsylvania Division of Recreation and George F. Kenworthy, superintendent of the park.

Washington Fertilizer Sales Show Decline

OLYMPIA, WASH.—Sales of commercial fertilizers, agricultural minerals and lime in Washington during the first half of 1956 totaled 126,143 tons, compared with 143,484 tons in the first half of 1955, according to the State Department of Agriculture.

The 1956 figure includes 83,962 tons of fertilizer materials, 20,491 tons of mixed goods, 9,930 tons of agricultural minerals and 12,328 tons of lime.

Total sales for the fiscal year ended June 30, 1956 amounted to 186,127 tons, compared with 203,497 tons the previous fiscal year.

Short Course for Aerial Dusters Scheduled in Ohio

COLUMBUS, OHIO—First special short course in this area for training of pilots interested in use of aircraft for crop dusting, seeding and other agricultural purposes will be held this fall at Ohio State University.

The university, in cooperation with the Ohio Aviation Board, has scheduled the course for Oct. 15-Nov. 21, 1956. It is planned to meet the particular needs and problems of aerial applicators in Ohio and other states extending from Minnesota and Iowa to Pennsylvania.

The complete course will include approximately 100 hours of ground school and 30 hours of flying, according to Prof. Richard L. King of the university's school of aviation, who will direct the training program.

Among the ground school subjects will be equipment calibration, air-

craft maintenance, insect control, weed and brush control, defoliation, seeding and fertilizing, disease control, laws and regulations and customer relations.

Persons interested in obtaining additional information should contact the Ohio State University School of Aviation, Columbus 10, Ohio.

J. D. Clary Named to New Davison Position

BALTIMORE—Dr. J. D. Clary has been named production superintendent of the Florida phosphate division of the Davison Chemical Co. division of W. R. Grace & Co. Dr. Clary, who won his doctorate in chemistry at Ohio State University, has been with the company since 1951, most recently as assistant works manager at Curtis Bay, Baltimore. William R. Fort is manager of the phosphate rock division.

Melon Fly Search On in California

SACRAMENTO — Federal, state and Los Angeles County agricultural agencies are continuing their search for melon flies in Los Angeles County but without result.

A lone female specimen trapped on the campus of the University of California at Los Angeles on Aug. 2 sparked the search. Although several thousand traps have been distributed in the immediate area of the first interception, no other melon flies have been found.

California Department of Agriculture forces are concentrating their detecting efforts in an area within a five mile radius of the campus. Federal and Los Angeles county inspectors are searching in peripheral sectors. In addition to the distribution and close checking of traps, bait spray will be applied on campus and nearby residential plantings.

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NAC CONVENTION

(Continued from page 1)

and to the nation's economy which fully justifies the effort.

"There are extremists who feel that most insect problems will be solved if we let nature take its course. It is apparent that under modern farming practices, nature's balance between certain destructive insects and their parasites permits too much damage to meet necessary standards of production efficiency. Therefore, we cannot depend on nature to solve our insect problems."

Looking to the future, Dr. Knipling said, "One of the greatest services that the entomological profession can render is to determine for the grower how and when to employ the insect control tools we have. We must be in a better position to make long range forecasts of insect outbreaks and to appraise the significance of an insect population in terms of potential damage to a crop."

"Increasing costs of crop production demand that maximum yields be obtained at minimum costs. To make substantial progress in this direction, we need extensive and intensive research on methods of insect survey and detection, economic effect at different levels of infestation, effect of climate, host relationships, interrelationship of the insect and biological control agents and other factors. Substantial research effort on this problem is long overdue."

In referring to the safety aspect of chemicals in protecting growing plants, Dr. Knipling said that to his knowledge, not a single human being has ever been injured from the presence of residues on food.

The panel on the place of pesticides

in the expanded highway program was moderated by Jack Dreesen, herbicide specialist of NAC. Appearing on the panel were William C. Greene, landscape engineer of the Connecticut State Highway Dept.; Raymond J. McMahon, president of McMahon Bros., Binghamton, N.Y.; Dr. C. O. Eddy, chairman of the chemicals subcommittee of the American Road Builders' Assn. committee on roadside maintenance, and H. F. Clemmer, coordinator of technical activities, American Road Builders' Assn.

Mr. Greene said that the job of the landscape engineer is to create beautiful roadsides in the most economical manner. "Were it not for the valuable chemical tools found in pesticides," he said, "the present-day highway would be almost utterly lost."

"With the constant demands for manpower and funds for more and more improvements in the extension of the highway system and for most adequate maintenance practices, chemical pesticides are a tremendous boon to the work for which we are responsible. It is now possible to accomplish a better job more economically with these chemicals."

Stating that Connecticut follows a continuous tree spraying program to control destructive insects, Mr. Greene said, "We feel that an adequate spray program saves each year many thousands of dollars that would necessarily be spent for the needless removal of our beautiful trees."

Turning to herbicides, Mr. Greene told of Connecticut's program of selective spraying for the control and

elimination of noxious, toxic and allergy producing weeds.

"With the proper and selective application of these chemicals and the eradication of herbaceous weeds, we improve our turf, increase the efficiency of our mowing equipment and improve the appearance of our highways. This, in turn, is a very important economic factor," he said.

The most expensive roadside areas to mow, according to Mr. Greene, are the areas around guide rails. He estimated that 75% of the cost of mowing in areas where guide rails exist is that required under the railings, but the use of chemical soil sterilants killed all growth in those areas thereby making it possible "for mechanical mowing equipment to more easily maintain the remaining areas behind the railings and thus release much of the manpower required for this operation."

Mr. McMahon reported that "in Steuben County, New York, the entire county highway system of 700 miles has, during the past three years, been made progressively safer and more beautiful at an annual cost of \$20,000, whereas prior to the chemical program, an annual expenditure of \$65,000 was losing the battle to vegetation, with highways growing ever more hazardous and unsightly."

Stating that even better records have been made in many counties and towns elsewhere, he said, "Yet, in face of proven economy and benefits to health and agriculture, not 10% of the highways of our country are now under chemical control."

He attributed part of this to the early abuse in the application of chemicals, some early ailments of the chemicals themselves and the fear on the part of highway superintendents to use chemicals without better equipment than was available at the time.

"These impediments have long been overcome, yet there persists a strange reluctance to abandon the practice of repeated, hazardous and expensive mowing and hand cutting operations; an abhorrent unwillingness to desist in the morally questionable practice of directing workmen afoot into areas infested with poison ivy; a sleepy response to the notion that there is even the slightest service due a hayfever sufferer from a highway department," Mr. McMahon said.

He pointed out that ragweed, a major cause of hayfever, poison ivy and other roadside weeds and brush responsible for injury and sometimes even death are without justification in this chemical age.

Quoting from insurance publications he said that "nine per cent of all fatal highway accidents are caused by obstructions along the roadside. The cost of these particular accidents to insurance companies . . . was \$270 million in 1955. The additional cost to those to whom these accidents occur cannot be even estimated."

Mr. McMahon concluded, "vegetation control along highways may be indefinitely better done by chemical means than by other existing means at half the present cost of such other means."

Dr. Eddy outlined the principles and objectives of the subcommittee—"to expand the use of chemicals to secure safe, beautiful and healthful highway areas while reducing maintenance costs and promoting roadside conservation practices."

He pointed out that while it has been known for some time that the use of chemicals is cheaper and a better way of accomplishing these objectives, "too few highway people know about it, even though a great deal of information is available in agriculture."

"Unfortunately," Dr. Eddy said, "most of the highway officials who were aware of the virtues of herbi-

MILLER BILL PANEL

A panel discussion on the Miller pesticide residue amendment was scheduled for presentation at the NAC convention on Sept. 7. Scheduled to appear were L. S. Hitchner, NAC executive secretary, moderator; Winton B. Rankin, Food and Drug Administration; John Coyne, U.S. Department of Agriculture; Dr. George C. Decker, Illinois Natural History Survey, and J. A. Noon, NAC technical adviser. A report of the panel discussion will appear in next week's issue of Croplife.

cides in highway maintenance became more conscious of problems they created than the ones they solved. The chemicals were intrinsically hazardous; application equipment was not suited to roadside work.

"Now, however, we have removed the volatility from the herbicides and have developed equipment to meet the task of applying it. These advancements, together with a new concept of roadside treatment have opened the door to widespread public and official acceptance of this phase of the industry's offerings."

The need for the use of chemicals in roadside maintenance was further stressed by Mr. Clemmer. He pointed out that the new federal highway bill authorized 41,000 miles of interstate and defense highways and called for rights of way with minimum widths up to 300 feet.

"Sufficient area to permit waysides for picnicking and rest are essential on all but high-speed throughways," he said. "Over two-thirds of the rights of way of the 8-lane highway and three-fourths of the 6-lane highway will be in the category of roadsides."

How much of this will be susceptible to landscaping? According to Mr. Clemmer it will be over a million acres. "The design policy followed for the interstate network will undoubtedly be reflected in the other state and county systems," he said.

"It is the aim of the committees of the American Road Builders' Assn. to assist in furnishing information which will lead to the use of the most modern materials, equipment and methods of construction," Mr. Clemmer said. "The next few years are going to be busy ones."

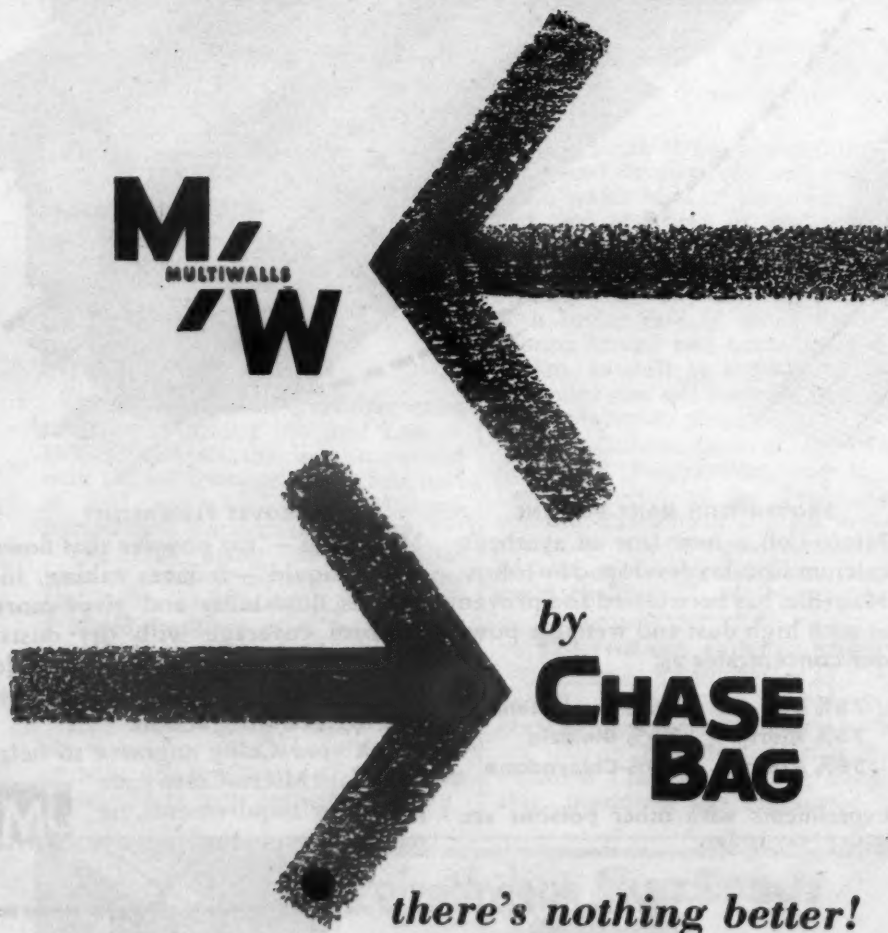
J. V. Vernon, president, Niagara Chemical Division Food Machinery and Chemical Corp., newly-elected NAC vice president, called for greater efforts on the part of manufacturers of pest control chemicals to aid the farmer in his battle against crop-destroying pests.

Citing the millions of dollars of damage caused to crops every year by insects, plant diseases and weeds, Mr. Vernon stated that without the use of pest control chemicals "we would be unable to grow enough food and fiber crops to feed and clothe our own people."

"The members of this industry are engaged in an essential business," Mr. Vernon declared. "We have assumed a direct responsibility for providing sufficient of our products to adequately protect our nation's agriculture. To my knowledge no emergency has arisen which has not been met."

In carrying out this responsibility, Mr. Vernon urged members of the industry to: 1) further improve existing products, 2) improve the techniques of using the products "so that maximum benefits can be obtained . . . by farmers who apply them to their crops," 3) continue cooperation in the world-wide problem of stamping out malaria through adequate control of disease-carrying insects, 4) further aid farmers to understand how they can use pest control chemicals to save expense of time and money in crop production.

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NAC PANEL

(Continued from page 1)

official efforts in the past three years to study farmers' sources of information. As a general rule, the association's 275 agricultural publications of all sorts have towered over the next most potent media by at least 10%.

Mr. Haffert supported his view by pointing out the work at Rutgers University in issuing helpful information to farmers via a weekly newsletter.

Not all farmers are willing to accept new ideas readily, Mr. Haffert reminded. He recalled that the "mediocre" farmer sometimes requires up to 10 years to adopt new farm material or farm practices and that he is influenced by many sources of information in that time. "I believe it is the teamwork of all agencies—manufacturers, publisher, dealer, state and county extension people, radio, television, direct mail and all other types of communication that gets the job done."

The teamwork theme was backed up by Dr. Fisher, who pointed out that between the time a farmer becomes aware of a new practice and the time he adopts it, there are intermediate states of interest, evaluation and trial. "Guidance to a successful trial will bring satisfaction and more rapid acceptance," he said.

Speaking on the work of the agricultural extension service, Dr. Fisher continued, "The agricultural extension service is charged with the job of influencing growers to practice pest control which research and practical application have proved to be sound."

Noting that "more people become aware of new ideas through mass communications media than from other sources," he said that pest control shares well in the figures for 1955 which show that county extension agents had a total of 823,079 news articles printed, 20,325 television appearances made and there were 227,522 radio broadcasts. "These data do not include additional work by subject matter specialists," he added.

Aside from these direct efforts, Dr. Fisher said that leader-training programs such as the 4-H club program had a great potential in reaching farmers. He quoted figures showing the great increase in 4-H club enrollments during the past years, pointing out that this is a significant point for the trade to note.

In making his presentation, Mr. McDonald stressed the role of the radio and television farm director as a man who is on a personal basis with the farmer. "The farm director is not an eight-hour man," he said. "He is in the field constantly, either getting information, visiting with dealers and farmers, or making speeches before groups of young potential customers. Stating that all of this helps the farm director to speak the farmer's language, he added: 'The farmer must have confidence in the farm director he listens to, because the farmer is a skeptical person.'"

Mr. McDonald declared that one of the finest assets a firm can have is a good dealer in his community and added that the radio farm director is in a position to help make the dealer better and more effective. "Farmers are changing," Mr. McDonald told the group. "They are better educated, better fed, better

entertained and their standard of living has greatly improved over the past few years," he said. To add to this trend, Mr. McDonald told the association, more money should be spent toward the education of the farmer to make him more aware of the role of pesticides.

Chief Jones, speaking from the standpoint of a dealer in the southwestern portion of the country, declared that the farmer depends mostly upon the knowledge of the dealer in finding out about pesticides and other materials.

He expressed doubt that a farmer, faced with an immediate infestation of insects in his crops, would turn to his radio, television or farm paper to find the answer about how to control them. "No, sir," Mr. Jones said. "That farmer would come straight to his dealer, and will ask him what should be done."

"The farmer," Mr. Jones said, "is interested in the man who takes his money; the man who speaks his language; the man who dons his overalls and goes out into the cotton fields and helps him with his insect problems. What that man thinks about this or that kind of insecticide—honestly and thoughtfully given—will, nine times out of 10, influence his buying," he asserted.

"By coming to me, the farmer has made his final decisive step," Mr. Jones said. "He is ready to purchase insecticide and he believes I can tell him which one to buy and how to apply it. In the end, it is the home town retailer who makes the decision for the ultimate consumer and I am proud of the confidence placed by farmers in their local insecticide retailers," Mr. Jones concluded.

He described one method his store has adopted of preventing second-guessing in case a farmer-customer is dissatisfied with the job done by a certain insecticide.

The store keeps a full record not only of the time and place of the sale, but also how the material was applied, by whom and under what circumstances. A sample of the material is also taken at the time of sale and is labeled and put away for possible future reference.

"If a customer complains about the way that insecticide acted," Mr. Jones explained, "we have the sample of the actual material used and are willing to send it to the state laboratories for analysis to settle the matter."

He added that such an arrangement removes all doubt and the customer is usually content to abide by the results found by the impartial test.

Giving the right answer to farmers who ask questions about pesticides is a particularly important matter, he said, "because we've got to keep on living in the same community with that man."

Iowa Soil Testing Laboratory Expanded

AMES, IOWA—Construction of badly-needed facilities for the Iowa State College Soil Testing Laboratory is being pushed toward a Nov. 15 completion date. John Hanway, agronomist in charge of the soil testing program, said that transfer of present equipment to the new laboratory facilities is scheduled to begin on that date.

New equipment will be added, he said, to make the soil testing operation as efficient as possible. The investment in new equipment will exceed \$11,000. The building itself will cost about \$50,000. The new construction will provide 2,600 square feet of floor space.

Growing Market Seen in Norway For U.S. Products

SAN FRANCISCO—Norway is a growing market for Pacific Coast farm produce, Jeffery W. Meyer, vice president, Wilson and Geo. Meyer & Co., said on his return to San Francisco from a trip to the Scandinavian country.

With Norway earning American dollars exporting substantial quantities of nitrogen fertilizers, fish, and other products to the U.S., the Norwegian government is showing an increasing willingness to release some of this dollar exchange to purchase products of western farms, Mr. Meyer said.

Mr. Meyer, who visited Norway to call on the manufacturers of Norsk Hydro calcium nitrate and urea fertilizers which his firm distributes on the Pacific coast, said larger shipments of these products to the Pacific Coast have been arranged.

The Norwegian manufacturers are reducing the biuret content of their urea product and are guaranteeing it will not be more than one per cent, Mr. Meyer said.

Two large motorships are being added to the Fred Olsen Line fleet this fall to expand the reciprocal trade between Norway and Pacific Coast ports, Mr. Meyer reported.

These new vessels are the 11,150 ton "Burrard", which sailed for the Pacific Coast on July 22, and the "Bolimas", which is expected to enter service in September.

Mr. Meyer said his firm, which imports large cargoes of calcium nitrate and urea via these Fred Olsen Line ships, will continue its policy of landing and warehousing these cargoes at ports which serve the maximum convenience of farm purchasers. These ports include San Diego, Long Beach, Los Angeles, Port Hueneme, Stockton, Richmond, Oakland, Portland, Vancouver, Washington, Seattle and Vancouver, British Columbia.

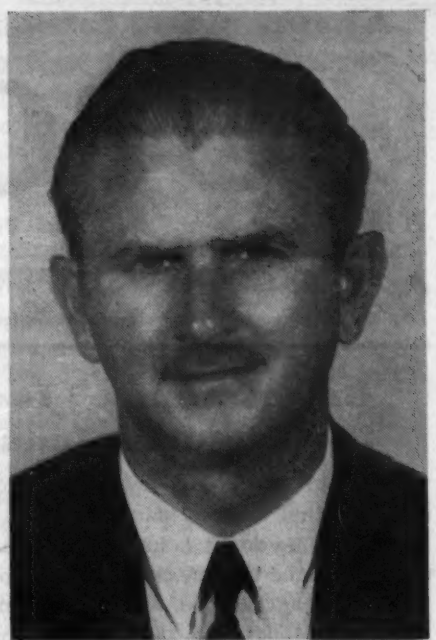
Wilson and Geo. Meyer and Co. maintains head offices in San Francisco with district offices in Phoenix, Los Angeles, Fresno, Portland, Seattle, Spokane, Salt Lake City and Denver.

Formation of New Sulphur Firm Announced

LOS ANGELES—Formation of Arizona Sulphur Co. with general offices in Los Angeles has been announced by Harry A. Medley, president.

The firm has installed a modern grinding mill in Glendale, Ariz. The plant has a daily capacity of 25 tons of finely ground dusting sulphur, which will be sold to Arizona fertilizer and insecticide manufacturers.

Mr. Medley also is president of United Sulphur Co., which has offices in Los Angeles.



J. Lauren Shopen

SAFETY SPEAKER—J. Lauren Shopen will speak on the subject, "The Safety Director in a Multiple Unit Organization" at the National Safety Council on Oct. 22 at the LaSalle Hotel in Chicago. Mr. Shopen is safety director for the Consumers Cooperative Assn. with headquarters in Kansas City. The association has numerous operations varying over a nine-state area. The operations include fertilizer plants, gasoline and longhaul trucking operations, refining, oil production, oil pipelines, exploration, drilling and other manufacturing operations including a feed mill, printing plant, paint manufacturing, grease manufacturing and warehousing. Mr. Shopen is a member of the American Society of Safety Engineers and is chairman of public relations for the Fertilizer Safety Section of the National Safety Council.

Bankers Issue Fertilizer Booklet

WASHINGTON—The Minnesota Bankers Assn., in cooperation with the University of Minnesota and the National Plant Food Institute, has published a 20-page booklet on "Bigger Profits From Better Farming in Minnesota," Russell Coleman, executive vice president of the institute, has announced.

The booklet emphasizes that "now, more than ever before, high profits in farming come from high-per-acre yields," and that "high yields depend on the application of modern 'know-how' to the ancient art of farming."

The purpose of the bulletin is "to show how scientific farming increases farm profits."

During 1955 and 1956, the institute has participated in one or more statewide projects in 15 states as well as in two national projects with bankers and their associations, cooperating with land-grant colleges.

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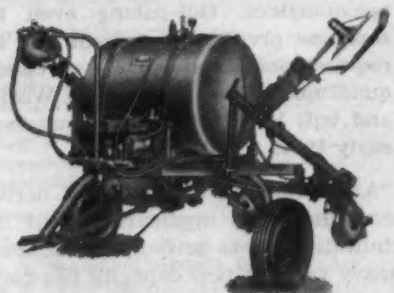
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CONVENTION COVERAGE

Coverage in this issue of the National Agricultural Chemicals Assn. convention is by the following CropLife staff members: Lawrence A. Long, Minneapolis, and Paul L. Dittmore, New York.

Croplife

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Southern states.

"Bright Future" Is Seen For Fertilizer Industry

The old adage that one can be so close to a situation that he sees individual trees rather than the forest, no doubt holds true for many persons engaged in the various chemical enterprises having to do with agriculture. Much of the news and information about the trade comes from sources within the industry, so it is interesting to see what outside qualified observers think when they look us over.

A recent investment survey published and copyrighted by Arnold Bernhard & Co., Inc., New York investment advisers, observes that the fertilizer industry, an "important and usually profitable division of the chemical industry," is going through "growing pains" which is the basic reason for current price weakness and over-capacity.

Such a situation is regarded as strictly temporary, since there is an "extremely bright future for the fertilizer industry," the report says. A number of good arguments are advanced to support this assertion, which should give heart to some in the trade who are inclined to look upon the present situation as being somewhat permanent.

Here are some of the points made by the investment people in their analysis of the fertilizer industry picture: Demand for fertilizer materials no longer correlates directly to the levels of crop prices and farm income, it is pointed out. Judiciously applied plant food increases the crop yield enough to enlarge the value of the farmer's saleable product by several times the cost of the fertilizer. Little or no advance in cultivating or handling expense is usually necessary. The sales problem has been largely an educational one. Total demand for fertilizer exhibited a marked growth until the beginning of this decade. Then annual consumption declined slightly from the 1952-53 season through the 1954-55 year. The past season (1955-56) witnessed a drop estimated at about 5%. Poor weather conditions, combined with general uncertainty about the Administration's farm program, were the factors responsible for the decline in over-all fertilizer consumption.

"Given normal weather, demand for fertilizer is expected to increase next year. Reason: the political uncertainties have been solved, and farmers will doubtless strive to maximize their yields from smaller acreage. The Soil Bank program will take 10.7 million acres (about 7% of total cultivated acreage) out of production. The withdrawal of this land will not cut into fertilizer demand much, if any. Most of the land is marginal, some of it may have been planted and then withdrawn because of poor weather conditions.

"Completion of a great deal of new anhydrous ammonia plant capacity has resulted in temporary over-capacity for this valuable plant food. Due to anticipated heavy demand for fertilizers, the post-war expansion of synthetic anhydrous ammonia capacity has been amazing even in an industry where extraordinary expansion is commonplace. Out-pacing even the most sanguine prediction of farm and industrial requirements, ammonia production has quadrupled since the close of World War II and will have increased about five-fold by early 1957.

"Ammonia and its upgraded derivatives have several industrial applications, but its most important uses are to be found in the fertilizer fields. A heavy wave of new capacity has gone on stream this year as the nation's fertilizer requirements have been faltering. This lower-than-anticipated demand has not unexpectedly touched off price weakness in urea, ammonium sulfate, mixed fer-

tilizer solutions, and off-season price shading in ammonia itself.

"Potash producers have also vastly expanded their production capacity well in excess of current demand. Cashing in on the healthy increase in demand for potash fertilizers, several new companies (Duval, Southwest, National Potash, and soon Farm Chemical Resources Corp.) have entered the field. Exploration is going on in Canada, where vast deposits of potash are believed to lie. Reflecting the current over-supply, several mines are now either shut down or working at half-capacity. Attempts to secure higher prices to compensate for increased wage and fuel costs were not successful.

"Why this rash of new capacity, patently in excess of current consumption? These companies are not plunking down their hard-earned dollars for new plants in the hope that the government will subsidize their production. The answer is to be found in the long-term view normally taken by chemical companies. Plants are built in anticipation of demand, not as a consequence of demand. Note that the excess capacity has been built in the ammonia and potash fertilizer constituents, and not the phosphate ingredient. The demand for ammonia and potash-based fertilizers has been skyrocketing upward, while demand for phosphate has merely ambled along.

"Over the longer term it seems clear that fertilizer consumption will increase substantially. The fertilizer companies are continuing their educational approach to the farmer. With the current turnaround in farm income, now creeping upward for the first time in several years, the agricultural segment of our economy will be better able to afford to fertilize crops.

"The number of farmers is declining and the size of the average farm is increasing. A farm is getting to be more like a business. This helps create a more favorable climate for fertilizer sales, which in essence represent short term capital investments made at the beginning of the growing season but which yield a cash return only at harvest time. The large-scale farmer should be quick to commit a portion of his cash capital in such a high-yielding short term investment. These trends, we think, will aid importantly in increasing the ability and readiness of the farmer to utilize fertilizer over the longer term.

"The 'Soil Bank', more liberal bank credit, larger scale farming, more scientific farming, and the plain desire of the businessman-farmer to make more money, all spell increased fertilizer application.

"Add to this the requirement that a given amount of arable land must produce food for a larger and larger population, and one concludes that there is an extremely bright future for the fertilizer industry."

Opportunity and Challenge

"A well-informed fertilizer dealer can make a real contribution to the area he serves. He has a challenge and an opportunity—a challenge to assist his farmer-customers in bridging the gap between modern fertilizer and lime know-how and its application—an opportunity to join forces with official workers in showing that plant food, used properly, can greatly increase farm income in his sales area."—Ralph L. Wehunt, Georgia Agricultural Extension Agronomist.

Quote

"I don't think there is any American farmer who would disagree with me when I say it is a blessing when we have high per acre production from all crops. I don't think there is a farmer (at least I don't know one) who would go back to the low per acre production we once had."—W. R. Thompson, agronomist, Mississippi Agricultural Extension Service.



Croplife



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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is \$5 for one year (\$8 a year outside the U.S.). Single copy price, 25¢.

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MEETING MEMOS

12 — New England Fertilizer Conference, Bald Peak Colony Club, Melvin Village, N.H.

13-19—Symposium on Chemicals in Food Production, Presented by Division of Chemical Marketing and Economics, American Chemical Society, Atlantic City, N.J.

27—New Jersey Fertilizer Conference, Rutgers University College of Agriculture.

8-10 — Carolinas-Virginia Pesticide Formulators Assn., Inc., Annual Meeting, Holly Inn, Pinehurst, N.C., W. R. Peele, 516 S. Salisbury St., Raleigh, Secretary-Treasurer.

9—Western Agricultural Chemicals Assn., Fall Meeting, Villa Hotel, San Mateo, Cal., C. O. Barward, 2466 Kenwood Ave., San Jose, Cal., Executive Secretary.

15 — Fifth Annual Chemical Sales Clinic, the Salesmen's Association of the American Chemical Industry; Hotel Commodore, New York City; chairman, Preston F. Tinsley, Westvaco Chlor-Alkali Division, Food Machinery and Chemical Corp., 161 East 42nd St., New York 17, N.Y.

16-17—National Nitrogen Solutions Assn., Annual Meeting and Trade Show, City Auditorium, Sioux City, Iowa; John White, Auburn, Neb., secretary.

16-18—Fertilizer Industry Round Table, Shoreham Hotel, Washington, D.C. Vincent Sauchelli, Chief Agronomist, Davison Chemical Co., Div. W. R. Grace Co., Baltimore 3, Md., chairman.

16-18—Canadian Agricultural Chemicals Assn., Fourth Annual Meeting and Conference, Sheraton-Brock Hotel, Niagara Falls, Ontario.

18-19—Association of American Fertilizer Control Officials, Shoreham Hotel, Washington, D.C., B. D. Cloaninger, Clemson Agricultural College, Clemson, S.C., secretary-treasurer.

22-23—Fertilizer Section, National Safety Council, La Salle Hotel, Chicago, Ill.; Curtis A. Cox, Virginia-Carolina Chemical Corp., Richmond, Va., chairman.

23-24—Pacific Northwest Garden Supply Trade Show, Shrine Auditorium, Portland, Ore.

25—Middle West Soil Improvement Committee, Annual Meeting, Sherman Hotel, Chicago; Z. H. Beers, Executive Secretary, 228 N. La Salle St., Chicago 1, Ill.

Nov. 2—Southern Soil Fertility Conference, Atlanta-Biltmore Hotel, Atlanta, Ga.

Nov. 7-9—Agricultural Ammonia Institute, Annual Convention, Atlanta Biltmore Hotel, Atlanta, Ga., Jack F. Criswell, Claridge Hotel, Memphis, executive vice president.

Nov. 7-9 — Pacific Northwest Plant Food Assn., Annual Convention, Harrison Hot Springs Hotel, Harrison Hot Springs, British Columbia, Leon S. Jackson, Lewis Bldg., Portland, Ore., secretary.

Nov. 11-13 — California Fertilizer Assn., 33rd annual convention, Del Coronado Hotel, Coronado, Cal.; Sidney H. Bierly, executive secretary, 475 Huntington Drive, San Marino 9, Cal.

Nov. 13-15—18th Annual New York State Insecticide and Fungicide Conference and 9th Annual Pesticide Application Equipment Conference, Bibbins Hall, Cornell University, Ithaca, N.Y.

Nov. 19-20 — Eastern Branch, Entomological Society of America, Hotel Haddon Hall, Atlantic City, N.J., B. F. Driggers, Rutgers Uni-

versity, New Brunswick, N.J., secretary.

Nov. 19-20—Ohio Pesticide Institute winter meeting, Neil House, Columbus, Ohio.

Nov. 27-28—Indiana Fertilizer Conference, Memorial Union, Purdue University, Lafayette, Ind.

Nov. 28—Oklahoma Fertilizer Dealers Conference, Sponsored by the Oklahoma Plant Food Educational Society, Oklahoma A&M College, Stillwater.

Nov. 29—Oklahoma Soils and Crops Conference, Oklahoma A&M College, Stillwater.

Dec. 6-7—Alabama Soil Fertility Society, Whitley Hotel, Montgomery, Ala.

Dec. 10-12—13th Annual North Central Weed Control Conference, Sherman Hotel, Chicago.

Dec. 27-31—Entomological Society of America, Annual Meeting, Hotel New Yorker, New York City.

July 17-19—Southwest Fertilizer Conference, Galvez Hotel, Galveston, Texas.

1957

Jan. 23-25 — Southern Weed Conference, Bon Aire Hotel, Augusta, Ga.; Walter K. Porter, Jr., Agricultural Experiment Station, Louisiana State University, Baton Rouge, secretary.

Jan. 28-29—National Cotton Council of America, Annual Meeting, St. Louis, Mo.

Jan. 31-Feb. 1-2 — Agricultural Aircraft Assn., Annual Convention, Senator Hotel, Sacramento, Cal.; Wanda Branstetter, Route 3, Box 1077, Sacramento, Executive Secretary.

June 26-28 — Eighth Annual Fertilizer Conference of the Pacific Northwest, Benson Hotel, Portland, Ore. B. R. Bertramson, Washington State College, Pullman, Wash., chairman.

North Central Weed Control Conference Set for Chicago

CHICAGO—The 13th annual North Central Weed Control Conference will be held Dec. 10-12 at the Sherman Hotel here.

According to F. W. Slife, University of Illinois, chairman of the program committee, and O. C. Lee and G. F. Warren, Purdue University, co-chairmen of local arrangements, the following sectional programs are planned:

Field crops, headed by R. S. Dunham, University of Minnesota; botany and plant physiology, L. G. Holm, University of Wisconsin; industrial weed control, R. L. Warden, Minneapolis; turf, W. H. Daniel, Purdue University; weeds, D. W. Staniforth, Iowa State College; horticulture, D. D. Hemphill, University of Missouri; regulatory and extension, H. T. Richards, University of Wisconsin; and water weeds and control in wildlife habitats, B. H. Grigsby, Michigan State University.

The sections on industrial weed control, turf and water weeds and weed control in wildlife habitat are new to the conference's program.

EXTENSION LEADER

LEXINGTON, KY.—S. C. Bohanan, on leave the past year from the University of Kentucky for advanced study, assumed his new duties Sept. 1 as chairman of agricultural programs in the Agricultural Extension Service.



C. A. Anderson, Jr. James W. Cox

APPOINTED—Fulton Bag & Cotton Mills announces the appointment of Charles A. Anderson, Jr., to the post of sales representative in Oklahoma City, and of James W. Cox to the sales department of the company's Dallas branch. Mr. Anderson graduated from Tulane University. He joined the sales department of Fulton's New Orleans office in 1953 where he remained until transferring to Fulton's Dallas branch in 1955. Mr. Cox joined Fulton's Dallas branch in 1952 and has served in various capacities in both office and sales work. The activities of both men are under the supervision of Fulton's Dallas branch located at 4301 S. Fitzhugh, whose manager is T. Raymond Berry.

Middle West Soil Improvement Group to Hear Earl L. Butz

CHICAGO — Earl L. Butz, assistant secretary of agriculture, will discuss "The Implications of the Soil Bank to the Fertilizer Industry" at the annual meeting of the Middle West Soil Improvement Committee, Oct. 25, at the Sherman Hotel here, it was announced by Z. H. Beers, executive secretary of the committee.

Mr. Butz' address is scheduled for 10 a.m. The morning program preceding and following his address will be devoted to the annual business meeting at which reports will be presented on the results of the committee's 1955-56 educational program. Plans will be formulated for new activities during the coming year.

TRAVELING WEEVIL

BLACKSBURG, VA.—The alfalfa weevil has spread from two counties to more than 60 in Virginia since 1952.

"Bleeding Canker" a Threat To New Hampshire Trees

DURHAM, N.H.—Forestry experts are concerned here over a mysterious "killer" that is threatening to wipe out sugar and red maple trees in New Hampshire. For a year, plant pathologists at the New Hampshire Agricultural Experiment Station here vainly have tried to stem the spread of the "bleeding canker," which seems to be spreading rapidly through the state.

The blight, which was discovered last summer at Rye, has spread from coastal regions to as far west as Keene. The state has called in the U.S. Forestry Service to help battle the disease. State Forestry Pathologist Arthur D. Partridge reports no practical control has been discovered yet. Young vigorous trees seem most susceptible, he said. When cankers girdle a tree it usually means death. Although maples are the primary target, the disease attacks other hardwoods but usually does not kill them.

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge \$2.25. Situations wanted, 10¢ a word; \$1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of \$9 per column inch. All Want Ads cash with order.

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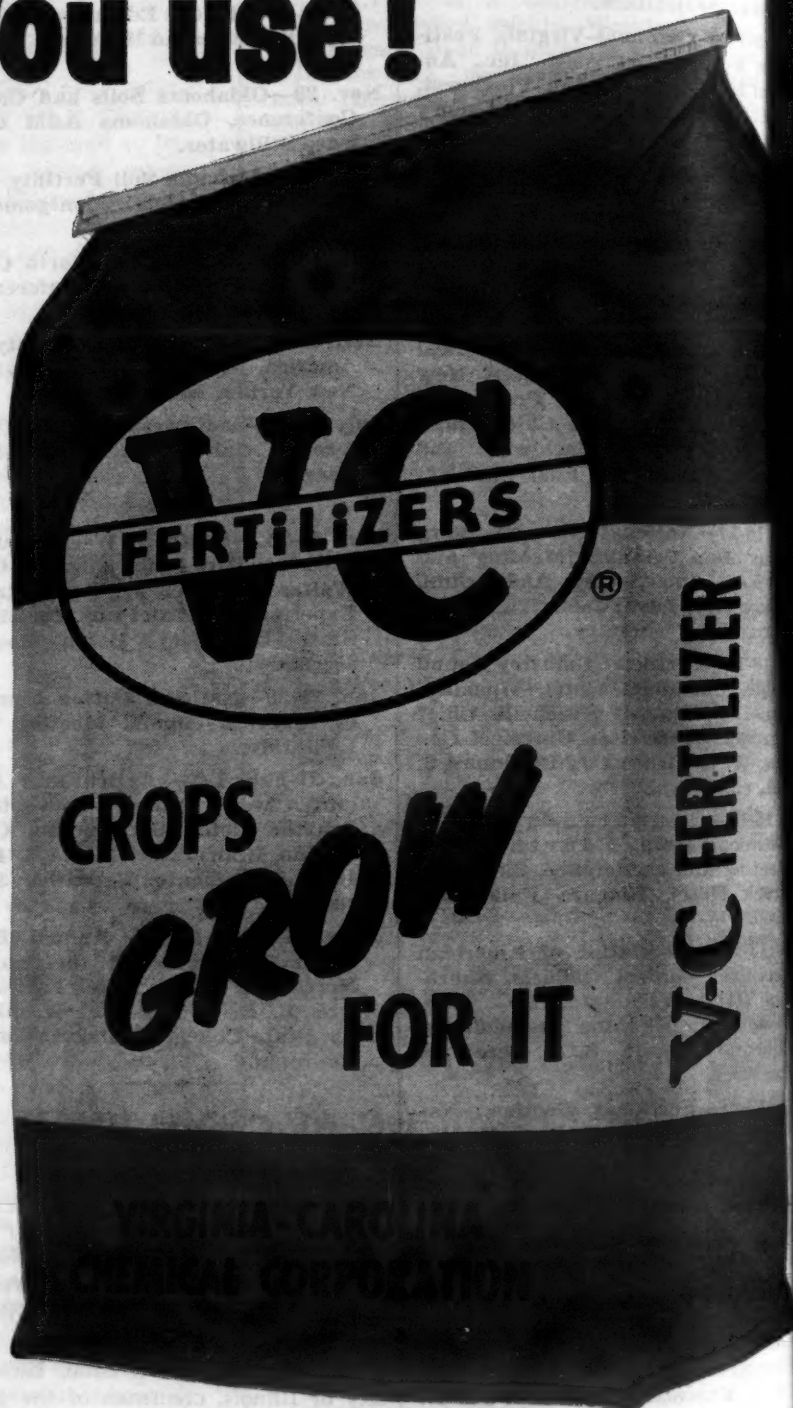
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